Final

Supplemental Site Investigation
Site-Specific Field Sampling Plan Addendum
and Site-Specific Safety and Health Plan Attachment
Former Decontamination Complex
Parcels 93(7), 46(7), and 70(7)

Fort McClellan
Calhoun County, Alabama

Delivery Order CK05
Contract No. DACA21-96-D-0018
IT Project No. 774645

September 2001

Revision 0

Final

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Site-Specific Field Sampling Plan Addendum
Former Decontamination Complex
Parcels 93(7), 46(7), and 70(7)

Fort McClellan
Calhoun County, Alabama

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Executive Summary

In accordance with Contract No. DACA21-96-D-0018, Delivery Order CK05, IT Corporation (IT) will conduct a supplemental site investigation (SI) at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7) at Fort McClellan in Calhoun County, Alabama. The purpose of the supplemental SI is to define the horizontal and vertical extent of vinyl chloride, 1,1,2,2-tetrachloroethane, and 2,6-dinitrotoulene (DNT) in groundwater, and the horizontal extent of chromium in surface soil. This site-specific field sampling plan (SFSP) will provide technical guidance for sampling activities at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7).

Parcel 93(7) and associated Parcels 46(7) and 70(7) are located in the northwestern portion of the Main Post on the corner of Trench Hill Road and Freemont Road. This area is the Former Decontamination Complex which was built in 1941, and covers four acres (including parking areas). The site has one building still standing (Building 1271) and several building foundations and paved areas. The site is currently being used by the Alabama National Guard as a storage facility.

IT conducted the initial SI at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), in 1998. The SI consisted of a geophysical survey and the collection and analysis of soil, groundwater, surface water, and sediment samples. Based on the SI analytical data, a supplemental SI is required to confirm the presence of groundwater and surface soil contamination. This site-specific field sampling plan addendum to the SI work plan for the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7) has been prepared to provide technical guidance and rationale for additional sample collection and analysis at the site. Specifically, IT will collect 11 groundwater samples and three surface soil samples during supplemental SI field activities. Chemical analyses of the samples will include volatile organic compounds (VOC), nitroaromatic/nitramine explosives, and metals. Results from these analyses will be compared with site-specific screening levels presented in the IT July, 2000 *Final Human Health and Ecological Screening Values and PAH Background Summary Report* and regulatory agency guidelines. The purpose of the supplemental SI is to define the horizontal and vertical extent of vinyl chloride, 1,1,2,2-tetrachloroethane, and 2,6-DNT in groundwater, and the horizontal extent of chromium in surface soil.

1.0 Project Description

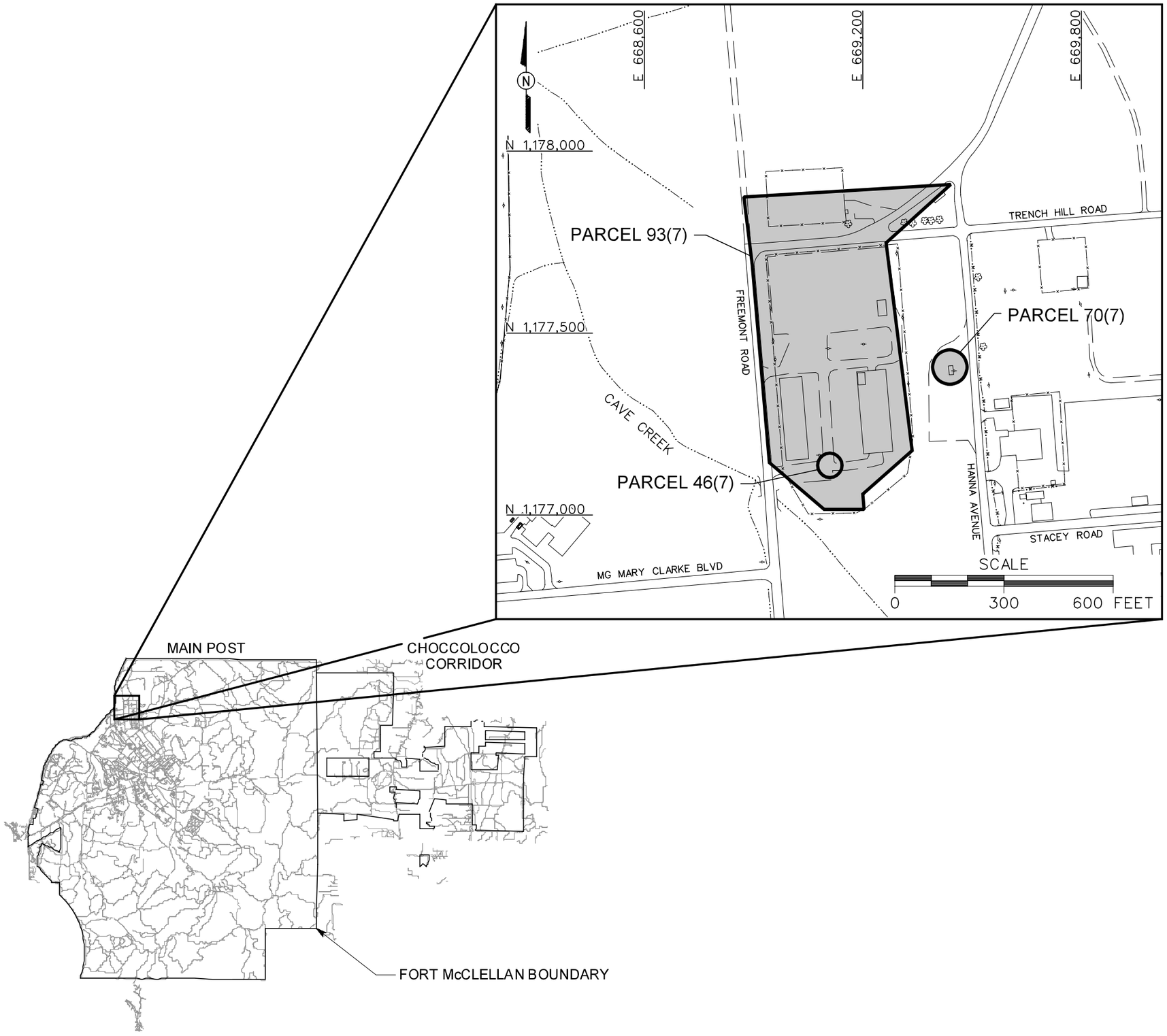
1.1 Introduction

The U.S. Army is conducting studies of the environmental impact of suspected contaminants at Fort McClellan (FTMC) in Calhoun County, Alabama, under the management of the U.S. Army Corps of Engineers (USACE)-Mobile District. The USACE has contracted IT Corporation (IT) to perform supplemental site investigation (SI) activities at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7), under Delivery Order CK05, Contract Number DACA21-96-D-0018.

FTMC is located in Calhoun County in northeast Alabama (Figure 1-1). FTMC comprises three sections, the Main Post, Pelham Range, and Choccolocco Corridor. The Former Decontamination Complex, Parcels, 93(7), 46(7), and 70(7), is located at the corner of Freemont Road and Trench Hill Road in the northwest portion of the Main Post (Figure 1-1). The site was classified as a Category 7 site in the environmental baseline survey (Environmental Science and Engineering, Inc. [ESE], 1998). Category 7 sites are areas that are unevaluated and/or that require additional evaluation.

This site-specific field sampling plan (SFSP) addendum to the FTMC installation-wide sampling and analysis plan (SAP) (IT, 2000a) has been prepared to provide technical guidance for additional sample collection and analysis at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7). The SFSP is intended to be used in conjunction with the site-specific safety and health plan (SSHP) developed for the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7), the installation-wide work plan (WP) (IT, 1998a), and the SAP. The SAP includes the installation-wide safety and health plan (SHP), the waste management plan, ordnance and explosives management plan, and quality assurance plan (QAP).

IT conducted site investigation activities at the Former Decontamination Complex in 1998. The SI consisted of a geophysical survey and the sampling and analysis of 24 surface soil samples, 5 depositional soil samples, 26 subsurface soil samples, 9 groundwater samples, 6 surface water samples, and 6 sediment samples to determine whether potential site-specific chemicals were present at concentrations that present an unacceptable risk to human health or the environment (IT, 1998b). The SI analytical results were compared to residential human health site-specific screening levels (SSSL), ecological screening values (ESV), and background screening values for metals and polynuclear aromatic hydrocarbons (PAH). The SSSLs, ESVs, and PAH background screening values are presented in the *Final Human Health and Ecological Screening Values and PAH Background Summary Report* (IT, 2000b). The PAH background screening



LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TREES / TREELINE
- PARCEL BOUNDARY
- SURFACE DRAINAGE / CREEK
- MANMADE SURFACE DRAINAGE FEATURE
- FENCE
- UTILITY POLE

FIGURE 1-1
SITE LOCATION MAP
FORMER DECONTAMINATION COMPLEX
PARCELS 93(7), 46(7), AND 70(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

IT CORPORATION
A Member of The IT Group

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STARTING DATE: 06/12/01 | DRAWN BY: D. BOMAR | INITIATOR: J. REMO | DRAFT. CHCK. BY: | DATE LAST REV.: | DWG. NO.: ...\774645es.767
DRAWN BY: | ENGR. CHCK. BY: J. JENKINS | PROJ. MGR.: J. YACOUB | PROJ. NO.: 774645

values were developed by IT at the direction of the Base Realignment and Closure Cleanup Team (BCT) to address the occurrence of PAH compounds in surface soils as a result of anthropogenic activities at FTMC. Background metals screening values are presented in the *Final Background Metals Survey Report, Fort McClellan, Alabama* (Science Applications International Corporation [SAIC]), 1998).

Laboratory analysis of samples collected during the SI detected concentrations of vinyl chloride (FTA-93-GP10 and FTA-93-GP22), 1,1,2,2-tetrachloroethane (FTA-93-GP10), and 2,6-dinitrotoluene (FTA-93-GP18) exceeding SSSLs in groundwater at three temporary monitoring well locations. Chromium was detected above its SSSL and background levels in one soil surface sample (FTA-93-GP09). Based on comparisons of the analytical data to the SSSLs, a supplemental SI is required to determine the horizontal and vertical extent of contaminants at this site.

The geophysical survey results indicated the presence of one anomaly representing a potential underground storage tank (UST) at Parcel 140(7). A subsurface excavation was conducted to investigate the area. Based on the results of the excavation, it was determined there were not any USTs present at the location of the anomaly. The excavation was backfilled and an Alabama Department of Environmental Management (ADEM) Closure Assessment Form was completed. A description of the geophysical survey conducted at Parcel 140(7) is presented in the *Draft Underground Storage Tank (UST) Removal and Closure Report, Fort McClellan, Calhoun County, Alabama* (IT, 2001). Based on the geophysical survey and the SI analytical results, the BCT agreed that no further action is necessary at Parcel 140(7) (as discussed at the August 21 and 22, 2001, BCT meeting).

A description of the Former Decontamination Complex and its previous uses is presented in the *Final Site-Specific Field Sampling Plan Attachment, Site Investigation at the Former Decontamination Complex Parcels 93(7), 46(7), 140(7), and 70(7), Fort McClellan, Calhoun County, Alabama* (IT, 1998b).

1.2 Scope of Work

The scope of work for supplemental SI activities at the Former Decontamination Complex includes the following tasks:

- Develop the SFSP attachment
- Develop the SSHP attachment

- Install 8 permanent residuum monitoring wells and 3 permanent bedrock monitoring wells. Collect 11 groundwater samples and 3 surface soil samples to determine the horizontal and vertical extent of contamination in the groundwater and surface soil at the site and to provide data useful for supporting any future corrective measures and closure activities.

Upon completion of the field activities and sample analyses, draft and final reports will be prepared that summarize the results of supplemental SI activities in accordance with current U.S. Environmental Protection Agency (EPA) Region IV and ADEM requirements.

2.0 Summary of Existing Environmental Studies

This chapter summarizes the SI activities conducted by IT in 1998 at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), including environmental sampling and analysis and geophysical survey results (IT, 1998b).

2.1 Environmental Sampling

The environmental sampling conducted during the initial SI at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), consisted of the collection and analysis of 24 surface soil samples, 5 depositional soil samples, 26 subsurface soil samples, 9 groundwater samples, 6 surface water samples and 6 sediment samples. The sample locations were determined by the on-site geologist based on the sampling rationale, presence of surface structures, site topography, and buried and overhead utilities. Analytical results were compared to residential human health SSSLs, ESVs, and background screening values for metals and PAHs, as presented in Tables 2-1 through 2-5. Existing sample locations are shown on Figure 2-1.

2.2 Surface and Depositional Soil Sampling

Twenty-four surface soil samples and five depositional soil samples were collected for chemical analysis at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7). Surface and depositional soil samples were collected from the upper 1 foot of soil at the locations shown on Figure 2-1. Analytical results were compared to residential human health SSSLs, ESVs, and background screening values (metals and PAHs) as shown in Table 2-1.

Metals. Twenty-one metals were detected in surface soil samples collected at the site. The concentrations of chromium at one location (FTA-93-GP09) and iron at two locations (FTA-93-GP21 and FTA-93-GP22) exceeded residential human health SSSLs, their respective background concentrations, and the range of background values. Figure 2-2 shows the locations of the metals that exceeded SSSLs and the range of background values.

The concentrations of 13 metals exceeded ESVs and their respective background concentrations. Of these 13 metals, cadmium (FTA-93-GP23), chromium (FTA-93-GP09), copper (FTA-93-GP23), iron (FTA-93-GP21 and FTA-93-GP22), lead (FTA-93-GP23), nickel (FTA-93-GP09), selenium (FTA-93-GP22 and WS-93-DEP01), and zinc (FTA-93-GP18), also exceeded the range of background values determined by SAIC (1998).

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-DEP01					FTA-93-DEP02					FTA-93-DEP03					FTA-93-DEP04				
Sample Number					DA0031					DA0032					DA0033					DA0034				
Sample Date					11-Nov-98					13-Nov-98					12-Nov-98					11-Nov-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																								
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	5.37E+03				YES	6.53E+03				YES	3.71E+03				YES	5.90E+03				YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	4.20E+00			YES		3.50E+00			YES		4.00E+00			YES		7.70E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	6.14E+01					6.45E+01					4.76E+01					5.57E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					9.20E-01		YES			ND					ND				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					7.60E-01		YES			ND					6.90E-01		YES		
Calcium	mg/kg	1.72E+03	NA	NA	2.60E+04	J	YES			1.55E+04	J	YES			7.90E+03	J	YES			8.72E+03	J	YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.10E+01				YES	1.44E+01				YES	1.24E+01				YES	1.65E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					ND					ND					9.50E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	7.40E+00					1.13E+01					1.40E+01		YES			1.57E+01		YES		
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	8.86E+03			YES	YES	9.04E+03			YES	YES	1.40E+04			YES	YES	2.27E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	2.50E+01					5.24E+01		YES		YES	3.86E+01					3.76E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	1.02E+04		YES			5.90E+03		YES			3.74E+03		YES			3.21E+03		YES		
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	3.81E+02			YES	YES	4.75E+02			YES	YES	3.42E+02				YES	5.11E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	1.10E-01		YES		YES	7.50E-02					5.80E-02					6.70E-02				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	ND					ND					ND					8.10E+00				
Potassium	mg/kg	8.00E+02	NA	NA	ND					ND					ND					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					ND					ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.88E+01				YES	1.78E+01				YES	1.04E+01				YES	1.13E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.06E+02		YES		YES	1.65E+02		YES		YES	5.52E+01		YES		YES	7.29E+01		YES		YES
VOLATILE ORGANIC COMPOUNDS																								
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	ND					ND					ND					1.30E-02	B			
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	1.50E-02	B				ND					1.20E-02	B				1.80E-01	J			
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND					ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					ND					ND					ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	6.40E-03	B				4.80E-03	B				3.80E-03	B				4.70E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					ND					ND					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-DEP01					FTA-93-DEP02					FTA-93-DEP03					FTA-93-DEP04				
Sample Number					DA0031					DA0032					DA0033					DA0034				
Sample Date					11-Nov-98					13-Nov-98					12-Nov-98					11-Nov-98				
Sample Depth (Feet)					0-1					0-1					0-1					0-1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																								
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					9.50E-02	J				ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	1.20E-01	J				1.30E-01	J				ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	3.80E+00		YES			5.00E+00		YES			ND					ND				
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	3.60E+00		YES		YES	4.90E+00		YES		YES	ND					ND				
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	1.00E+00			YES		1.90E+00		YES	YES		6.60E-02	J				ND				
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	2.30E+00		YES	YES	YES	3.60E+00		YES	YES	YES	8.70E-02	J		YES		ND				
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	2.50E+00		YES	YES		3.60E+00		YES	YES		1.00E-01	J				ND				
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	1.90E+00		YES			2.40E+00		YES			6.00E-02	J				ND				
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	2.70E+00		YES			4.30E+00		YES			9.40E-02	J				ND				
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND					ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	3.00E-01	J				3.80E-01	J				ND					ND				
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	1.30E+00					2.20E+00		YES			8.50E-02	J				ND				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	6.80E-01	J		YES		9.60E-01		YES	YES		ND					ND				
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND					ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	1.20E+00				YES	2.10E+00		YES		YES	1.30E-01	J			YES	ND				
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	1.10E-01	J				2.90E-01	J				ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	1.70E+00		YES	YES		2.10E+00		YES	YES		5.90E-02	J				ND				
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	3.60E-01	J			YES	4.10E-01	J			YES	ND					ND				
Phenol	mg/kg	NA	4.66E+03	5.00E-02	9.70E-02	J			YES	1.00E-01	J			YES	ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	1.80E+00		YES		YES	3.10E+00		YES		YES	1.00E-01	J			YES	ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	ND					ND					6.40E-02	J				ND				
PESTICIDES																								
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	4.00E-03	J			YES	1.00E-02	J			YES	3.40E-03	J			YES	ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	8.90E-03				YES	1.20E-02				YES	1.40E-02				YES	ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	6.40E-03					2.30E-02				YES	ND					ND				
PCBs																								
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP03					FTA-93-GP04					FTA-93-GP05					FTA-93-GP06				
Sample Number					DA0003					DA0004					DA0005					DA0006				
Sample Date					23-Oct-98					23-Oct-98					19-Oct-98					19-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																								
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	4.10E+03				YES	3.56E+03				YES	1.56E+03				YES	2.94E+03				YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	5.80E+00			YES		1.40E+00			YES		2.20E+00			YES		3.90E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	5.88E+01					ND					2.44E+01					ND				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					ND					ND					ND				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					ND					ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	1.19E+04	J	YES			1.99E+03	J	YES			1.84E+05		YES			1.12E+05		YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	7.20E+00	J			YES	6.30E+00	J			YES	1.09E+01	J			YES	2.45E+01	J		YES	YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					ND					ND					ND				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	4.30E+00					3.60E+00					1.53E+01		YES			1.16E+01				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	4.93E+03			YES	YES	5.87E+03			YES	YES	3.41E+03			YES	YES	6.50E+03			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	3.59E+01					5.70E+00					1.48E+01					1.11E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	2.85E+03	J	YES			1.06E+03	J	YES			4.08E+04		YES			5.73E+04		YES		
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	1.21E+02	J			YES	3.59E+01	J				9.18E+01					1.28E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					ND					ND					ND				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	ND					ND					7.60E+00					ND				
Potassium	mg/kg	8.00E+02	NA	NA	ND					ND					ND					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					ND					ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	9.60E+00				YES	7.30E+00				YES	1.88E+01				YES	2.46E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	6.37E+01		YES		YES	8.40E+00	B				3.00E+01	B				1.48E+02		YES		YES
VOLATILE ORGANIC COMPOUNDS																								
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	2.90E-03	J				ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	ND					ND					ND					ND				
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	ND					2.60E-01	J				ND					ND				
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND					ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					ND					ND					ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	3.40E-03	J				ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	5.40E-03	B				4.40E-03	B				4.80E-03	B				4.70E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					ND					ND					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	1.10E-02					4.70E-03	J				ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	3.20E-03	B				ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	1.50E-02	J				4.50E-03	J				ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP03					FTA-93-GP04					FTA-93-GP05					FTA-93-GP06				
Sample Number					DA0003					DA0004					DA0005					DA0006				
Sample Date					23-Oct-98					23-Oct-98					19-Oct-98					19-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																								
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND					ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					ND					ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	2.70E-01	J				5.40E-02	J				2.40E-01	J				2.50E-01	J			
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	1.90E-01	J			YES	4.60E-02	J				2.40E-01	J			YES	3.50E-01				YES
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	1.90E-01	J				ND					5.80E-01					1.10E+00			YES	
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	3.90E-01			YES	YES	5.40E-02	J				1.10E+00			YES	YES	1.30E+00			YES	YES
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	3.90E-01					5.80E-02	J				1.20E+00			YES		1.80E+00		YES	YES	
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	ND					ND					6.80E-02	J				ND				
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	3.80E-01					6.90E-02	J				1.10E+00	J				1.50E+00	J	YES		
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND					ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	ND					ND					5.20E-02	J				1.10E-01	J			
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	2.50E-01	J				ND					7.60E-01					1.20E+00				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	1.70E-01	B				2.30E-01	B				ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	8.80E-02	J		YES		ND					9.70E-02	J		YES		3.60E-02	J			
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND					ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	2.10E-01	J			YES	ND					9.10E-01				YES	2.00E+00				YES
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	ND					ND					ND					9.30E-02	J			
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	2.00E-01	J				4.10E-02	J				1.90E-01	J				1.90E-01	J			
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	4.20E-02	J				ND					2.10E-01	J			YES	7.30E-01				YES
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND					4.90E-02	B				ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	2.30E-01	J			YES	3.70E-02	J				1.20E+00				YES	2.10E+00		YES		YES
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	5.80E-02	B				7.20E-02	B				7.80E-02	B				7.60E-02	B			
PESTICIDES																								
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	2.90E-03				YES	ND					ND					ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	3.30E-02				YES	ND					ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	2.20E-02				YES	ND					ND					ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND					ND					ND				
PCBs																								
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP07					FTA-93-GP08					FTA-93-GP09					FTA-93-GP10				
Sample Number					DA0007					DA0008					DA0009					DA0010				
Sample Date					18-Oct-98					19-Oct-98					19-Oct-98					19-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																								
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	9.78E+02				YES	4.26E+03				YES	4.03E+03				YES	3.78E+03				YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	3.10E+00			YES		2.30E+00			YES		3.20E+00			YES		1.50E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	2.81E+01					2.76E+01					1.75E+02		YES		YES	2.57E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					ND					ND					ND				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					ND					ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	2.26E+05		YES			7.94E+03		YES			8.16E+03		YES			8.57E+04	J	YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	ND					1.17E+01	J			YES	1.51E+02	J	YES	YES	YES	1.02E+01	J			YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					ND					1.09E+01					ND				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	7.80E+00					3.40E+00					9.80E+00					3.30E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	4.57E+03			YES	YES	8.98E+03			YES	YES	1.46E+04			YES	YES	5.38E+03			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.01E+01					1.78E+01					1.56E+01					1.65E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	6.54E+04		YES			2.25E+03		YES			3.19E+03		YES			5.55E+03	J	YES		
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	9.95E+01					4.57E+02			YES	YES	9.80E+02			YES	YES	7.40E+01				
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					ND					ND					ND				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	ND					ND					6.62E+01		YES		YES	ND				
Potassium	mg/kg	8.00E+02	NA	NA	ND					ND					5.45E+02					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					ND					ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.91E+01				YES	1.36E+01				YES	1.48E+01				YES	1.37E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	4.98E+01		YES			7.80E+00	B				9.70E+00	B				1.18E+01	B			
VOLATILE ORGANIC COMPOUNDS																								
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					2.30E-03	J				1.20E-02	J				ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					3.80E-03	J				ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	ND					ND					ND					ND				
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	1.70E-02	B				7.40E-01	J				2.80E+00	J			YES	5.40E-02	B			
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND					ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					ND					5.40E-03					ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	5.00E-03	B				5.90E-03	B				6.80E-03	B				4.20E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					6.00E-03	J				7.30E-02	J				ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP07					FTA-93-GP08					FTA-93-GP09					FTA-93-GP10				
Sample Number					DA0007					DA0008					DA0009					DA0010				
Sample Date					18-Oct-98					19-Oct-98					19-Oct-98					19-Oct-98				
Sample Depth (Feet)					0-1					0-1					0-1					0-1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																								
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND					ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					5.50E-01	J				6.60E-01	J				ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	3.50E-01	J				2.00E+00	J	YES			1.10E+00	J	YES			ND				
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	3.10E-01	J			YES	3.70E+00		YES		YES	2.50E+00	J	YES		YES	ND				
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	6.70E-01	J				1.00E+01		YES	YES	YES	4.80E+00		YES	YES		ND				
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	9.60E-01	J		YES	YES	1.20E+01		YES	YES	YES	4.80E+00		YES	YES	YES	ND				
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	7.00E-01	J				1.30E+01		YES	YES		4.40E+00		YES	YES		ND				
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	7.70E-01	J				1.80E+00	J	YES			8.20E-01	J				ND				
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	9.70E-01	J				1.30E+01		YES	YES		6.00E+00		YES			ND				
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND					ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	ND					9.90E-01	J				8.60E-01	J				ND				
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	7.80E-01	J				1.20E+01		YES		YES	5.20E+00		YES		YES	ND				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	3.70E-01	J		YES		1.40E+00	J	YES	YES		5.60E-01	J		YES		ND				
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					4.40E-01	J				6.10E-01	J				ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	1.50E+00	J			YES	2.30E+01		YES		YES	1.20E+01		YES		YES	ND				
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	ND					1.20E+00	J	YES			1.70E+00	J	YES			ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	7.00E-01	J				2.40E+00	J	YES	YES		1.00E+00	J	YES	YES		ND				
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	4.00E-01	J			YES	9.90E+00		YES		YES	6.10E+00		YES		YES	ND				
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND					ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	1.20E+00	J			YES	2.40E+01		YES		YES	9.60E+00		YES		YES	ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	ND					ND					ND					ND				
PESTICIDES																								
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND					ND					ND				
PCBs																								
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP11					FTA-93-GP12					FTA-93-GP13					FTA-93-GP14				
Sample Number					DA0013					DA0014					DA0015					DA0016				
Sample Date					20-Oct-98					19-Oct-98					16-Oct-98					16-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																								
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.67E+03				YES	5.31E+03				YES	3.94E+03				YES	8.35E+03			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	2.10E+00			YES		2.50E+00			YES		4.00E+00			YES		6.50E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	2.55E+01					3.19E+01					4.08E+01					3.29E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					ND					ND					ND				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					ND					ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	1.52E+04		YES			9.89E+02					2.84E+04		YES			2.38E+04		YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.82E+01				YES	8.10E+00	J			YES	1.71E+01	J			YES	4.03E+01	J	YES	YES	YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					7.20E+00					ND					7.30E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	2.90E+00					4.40E+00					1.07E+01					9.90E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.07E+04	J		YES	YES	9.95E+03			YES	YES	1.42E+04			YES	YES	2.38E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	7.70E+00					1.54E+01					5.73E+01		YES		YES	1.30E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	1.65E+03		YES			ND					1.06E+04		YES			1.34E+04		YES		
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	7.00E+01					2.59E+02				YES	3.09E+02				YES	2.40E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					ND					ND					ND				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	4.20E+00					ND					7.60E+00					1.01E+01				
Potassium	mg/kg	8.00E+02	NA	NA	ND					ND					ND					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					ND					ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.03E+01	J			YES	7.20E+00				YES	1.22E+01				YES	1.69E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.37E+01	B				1.58E+01	B				2.76E+01	B				2.14E+01	B			
VOLATILE ORGANIC COMPOUNDS																								
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	ND					3.30E-03	J				ND					4.70E-03	J			
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	ND					3.80E+00	J			YES	6.10E-02	J				4.60E-02	B			
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND					ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					ND					2.20E-03	J				ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	3.00E-03	B				4.90E-03	B				2.50E-03	B				2.20E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					ND					ND					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP11					FTA-93-GP12					FTA-93-GP13					FTA-93-GP14				
Sample Number					DA0013					DA0014					DA0015					DA0016				
Sample Date					20-Oct-98					19-Oct-98					16-Oct-98					16-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																								
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND					ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					ND					ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	4.00E-02	J				ND					ND					ND				
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	ND					ND					ND					ND				
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	6.80E-02	J				ND					ND					ND				
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	1.10E-01	J		YES	YES	ND					ND					ND				
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	9.30E-02	J				ND					ND					ND				
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	8.40E-02	J				ND					ND					ND				
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	1.50E-01	J				ND					ND					ND				
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND					ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	ND					ND					ND					ND				
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	8.70E-02	J				ND					ND					ND				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	3.60E-02	J				ND					ND					ND				
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND					ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	6.40E-02	J				ND					ND					ND				
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	ND					ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	7.30E-02	J				ND					ND					ND				
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	ND					ND					ND					ND				
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND					ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	6.80E-02	J				ND					ND					ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	9.30E-02	B				4.70E-02	B				6.00E-02	B				1.30E-01	B			
PESTICIDES																								
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND					ND					ND				
PCBs																								
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP15					FTA-93-GP16					FTA-93-GP17					FTA-93-GP18				
Sample Number					DA0017					DA0018					DA0019					DA0020				
Sample Date					20-Oct-98					20-Oct-98					20-Oct-98					16-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																								
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	9.59E+03			YES	YES	1.65E+04		YES	YES	YES	2.33E+03				YES	2.63E+03				YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	4.90E+00			YES		7.60E+00			YES		4.00E+00			YES		2.60E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	1.32E+02		YES			2.56E+02		YES		YES	ND					5.42E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	6.10E-01					1.00E+00		YES			ND					ND				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					ND					ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	7.26E+03		YES			2.87E+03		YES			6.96E+04		YES			3.25E+03		YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.75E+01				YES	2.46E+01			YES	YES	1.91E+01				YES	1.07E+01	J			YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	1.11E+01					1.63E+01		YES			ND					ND				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	8.70E+00					9.90E+00					6.20E+00					2.29E+01		YES		
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.92E+04	J		YES	YES	2.86E+04	J		YES	YES	5.05E+03	J		YES	YES	1.22E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	6.90E+01		YES		YES	6.63E+01		YES		YES	2.68E+01					5.17E+01		YES		YES
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	3.93E+03		YES			7.79E+02					3.82E+04		YES			1.49E+03		YES		
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	1.79E+03		YES	YES	YES	2.82E+03		YES	YES	YES	1.13E+02				YES	3.87E+02			YES	YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	4.60E-02					7.90E-02					ND					ND				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	8.00E+00					1.49E+01		YES			6.30E+00	B				ND				
Potassium	mg/kg	8.00E+02	NA	NA	ND					6.38E+02					ND					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					8.10E-01		YES		YES	ND					5.60E-01		YES		
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					1.40E+00	B		YES	YES	ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	2.21E+01	J			YES	3.33E+01	J			YES	1.86E+01	J			YES	ND				
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	6.24E+01	J	YES		YES	5.65E+01	J	YES		YES	3.11E+01	J				2.44E+02		YES		YES
VOLATILE ORGANIC COMPOUNDS																								
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	7.90E-03	J				6.40E-03	J				ND					4.10E-03	J			
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	1.40E-01	B				1.60E-01	B				7.80E-02	B				6.70E-02	J			
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND					ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					ND					ND					ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	7.00E-03	B				8.00E-03	B				8.10E-03	B				2.60E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					ND					ND					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP15					FTA-93-GP16					FTA-93-GP17					FTA-93-GP18				
Sample Number					DA0017					DA0018					DA0019					DA0020				
Sample Date					20-Oct-98					20-Oct-98					20-Oct-98					16-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																								
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND					ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					ND					ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	ND					ND					ND					3.80E-02	J			
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	5.50E-02	J				ND					ND					8.60E-02	J			
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	1.20E-01	J				6.70E-02	J				ND					2.20E-01	J			
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	1.10E-01	J		YES	YES	7.20E-02	J				ND					2.40E-01	J		YES	YES
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	1.10E-01	J				5.50E-02	J				ND					3.00E-01	J			
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	6.10E-02	J				ND					ND					1.70E-01	J			
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	1.50E-01	J				8.30E-02	J				ND					4.70E-01				
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND					ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	ND					ND					ND					1.30E-01	J			
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	1.30E-01	J				7.50E-02	J				ND					3.80E-01				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	ND					ND					ND					7.50E-02	J			
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND					ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	2.90E-01	J			YES	1.10E-01	J			YES	ND					8.00E-01				YES
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	ND					ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	6.10E-02	J				ND					ND					1.70E-01	J			
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	1.90E-01	J			YES	ND					ND					3.90E-01				YES
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND					ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	2.10E-01	J			YES	8.70E-02	J				ND					5.10E-01				YES
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	1.10E-01	B				7.70E-02	B				ND					1.40E-01	B			
PESTICIDES																								
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					9.20E-02				YES	ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND					ND					ND				
PCBs																								
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP19					FTA-93-GP20					FTA-93-GP21					FTA-93-GP22				
Sample Number					DA0021					DA0022					DA0023					DA0024				
Sample Date					20-Oct-98					20-Oct-98					27-Oct-98					27-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																								
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	2.50E+03				YES	3.04E+03				YES	1.12E+04			YES	YES	1.63E+04			YES	YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	2.80E+00			YES		1.70E+00			YES		3.10E+00			YES		1.98E+01		YES	YES	YES
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	1.32E+02		YES			2.16E+01					2.77E+01					3.82E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					ND					7.70E-01					6.70E-01				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					ND					ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	1.99E+04		YES			9.82E+03		YES			2.45E+03	J	YES			ND				
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.32E+01				YES	9.40E+00				YES	2.95E+01	J		YES	YES	3.41E+01	J		YES	YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					ND					1.47E+01					7.20E+00				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	6.30E+00					5.00E+00					1.89E+01		YES			1.41E+01		YES		
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	1.06E+04	J		YES	YES	5.74E+03	J		YES	YES	5.96E+04		YES	YES	YES	5.92E+04		YES	YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	1.82E+01					2.49E+01					4.09E+01		YES			1.67E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	1.07E+04		YES			4.03E+03		YES			ND					ND				
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	8.68E+02			YES	YES	1.69E+02				YES	1.71E+02	J			YES	3.01E+02	J			YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					ND					8.80E-02		YES			8.90E-02		YES		
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	6.30E+00	B				ND					1.47E+01		YES			9.90E+00				
Potassium	mg/kg	8.00E+02	NA	NA	ND					ND					7.47E+02					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					ND					ND					1.80E+00		YES		YES
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					ND					ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.00E+01	J			YES	8.50E+00	J			YES	1.63E+01				YES	2.86E+01	J			YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.46E+01	B				2.14E+01	B				1.23E+02		YES		YES	3.88E+01				
VOLATILE ORGANIC COMPOUNDS																								
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND					ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	ND					ND					ND					ND				
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	ND					ND					3.30E-02	B				3.00E-02	B			
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND					ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					ND					ND					ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	ND					ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	3.80E-03	B				3.50E-03	B				6.50E-03	B				5.20E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					ND					ND					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP19					FTA-93-GP20					FTA-93-GP21					FTA-93-GP22				
Sample Number					DA0021					DA0022					DA0023					DA0024				
Sample Date					20-Oct-98					20-Oct-98					27-Oct-98					27-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																								
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND					ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					ND					ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	ND					ND					ND					ND				
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	ND					ND					ND					ND				
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	7.00E-02	J				ND					ND					ND				
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	7.40E-02	J				ND					ND					ND				
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	7.90E-02	J				ND					ND					ND				
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	ND					ND					ND					ND				
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	9.40E-02	J				ND					ND					ND				
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND					ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	ND					ND					ND					ND				
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	8.40E-02	J				ND					ND					ND				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	ND					ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	ND					ND					ND					ND				
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND					ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	1.50E-01	J			YES	ND					ND					ND				
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	ND					ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	ND					ND					ND					ND				
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	5.90E-02	J				ND					ND					ND				
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND					ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	1.30E-01	J			YES	ND					ND					ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	7.90E-02	B				7.20E-02	B				6.40E-02	J				ND				
PESTICIDES																								
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND					ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND					ND					ND				
PCBs																								
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP23					FTA-93-GP24					FTA-93-GP25				
Sample Number					DA0027					DA0028					DA0029				
Sample Date					20-Oct-98					20-Oct-98					20-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	3.71E+03				YES	2.66E+03				YES	2.40E+03				YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	7.10E+00			YES		2.20E+00			YES		2.00E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	5.66E+01					3.59E+01					4.96E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	6.80E-01					ND					ND				
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	2.70E+00		YES		YES	ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	3.84E+04		YES			8.36E+03		YES			2.04E+04		YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	6.64E+01		YES	YES	YES	6.96E+01		YES	YES	YES	2.16E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					ND					ND				
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	5.95E+01		YES		YES	1.11E+01					6.80E+00				
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	4.69E+04	J	YES	YES	YES	9.19E+03	J		YES	YES	1.30E+04	J		YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	8.94E+01		YES		YES	1.63E+01					3.84E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	1.01E+04		YES			1.61E+03		YES			4.43E+03		YES		
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	4.48E+02			YES	YES	1.78E+02				YES	3.12E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	1.40E-01		YES		YES	2.50E-01		YES		YES	ND				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	2.48E+01		YES			2.93E+01		YES			5.20E+00	B			
Potassium	mg/kg	8.00E+02	NA	NA	ND					ND					ND				
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	8.40E-01		YES		YES	ND					ND				
Sodium	mg/kg	6.34E+02	NA	NA	ND					ND					ND				
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					ND					ND				
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	ND					7.00E+00	J			YES	7.00E+00	J			YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.50E+02	J	YES		YES	1.74E+01	B				2.33E+01	B			
VOLATILE ORGANIC COMPOUNDS																			
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	ND					ND					ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	ND					ND					ND				
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	ND					ND					ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	ND					ND					ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	ND					2.80E-02	B				ND				
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					1.60E-03	J				ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	ND					ND					ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	ND					1.80E-03	J				ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	ND					ND					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	3.30E-03	B				7.90E-03	B				3.20E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	ND					ND					ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					ND					ND				
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	ND					ND					ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	ND					ND					ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP23					FTA-93-GP24					FTA-93-GP25				
Sample Number					DA0027					DA0028					DA0029				
Sample Date					20-Oct-98					20-Oct-98					20-Oct-98				
Sample Depth (Feet)					0- 1					0- 1					0- 1				
Parameter	**Units**	**BKG[a]**	**SSSL[b]**	**ESV[b]**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**
SEMIVOLATILE ORGANIC COMPOUNDS																			
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	ND					ND					ND				
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	ND					ND					ND				
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	ND					ND					ND				
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	ND					ND					ND				
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	ND					ND					ND				
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	ND					ND					ND				
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	ND					ND					ND				
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	3.70E-02	J				ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	ND					ND					ND				
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	ND					ND					ND				
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	ND					ND					ND				
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND					1.40E-01	J			
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	4.70E-02	J				ND					ND				
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	ND					ND					ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	ND					ND					ND				
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	ND					ND					ND				
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	3.00E-02	J				ND					ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	1.80E-01	B				6.70E-02	B				9.30E-02	B			
PESTICIDES																			
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	ND					ND					ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	ND					ND					ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND					ND				
PCBs																			
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					1.10E-01	J			YES	ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP26					WS-93-DEP01				
Sample Number					DA0030					WS0001				
Sample Date					23-Oct-98					16-Mar-99				
Sample Depth (Feet)					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS														
Aluminum	mg/kg	1.63E+04	7.80E+03	5.00E+01	3.39E+03				YES	6.34E+03				YES
Arsenic	mg/kg	1.37E+01	4.26E-01	1.00E+01	ND					8.30E+00			YES	
Barium	mg/kg	1.24E+02	5.47E+02	1.65E+02	ND					3.87E+01				
Beryllium	mg/kg	8.00E-01	9.60E+00	1.10E+00	ND					8.50E-01		YES		
Cadmium	mg/kg	2.90E-01	6.25E+00	1.60E+00	ND					ND				
Calcium	mg/kg	1.72E+03	NA	NA	1.30E+04	J	YES			1.87E+03		YES		
Chromium	mg/kg	3.70E+01	2.32E+01	4.00E-01	1.24E+01	J			YES	1.50E+01				YES
Cobalt	mg/kg	1.52E+01	4.68E+02	2.00E+01	ND					5.90E+00	J			
Copper	mg/kg	1.27E+01	3.13E+02	4.00E+01	ND					2.08E+01		YES		
Iron	mg/kg	3.42E+04	2.34E+03	2.00E+02	2.90E+03			YES	YES	3.00E+04			YES	YES
Lead	mg/kg	4.01E+01	4.00E+02	5.00E+01	5.70E+00					2.93E+01				
Magnesium	mg/kg	1.03E+03	NA	4.40E+05	4.96E+03	J	YES			5.79E+02	J			
Manganese	mg/kg	1.58E+03	3.63E+02	1.00E+02	1.03E+02	J			YES	3.08E+02				YES
Mercury	mg/kg	8.00E-02	2.33E+00	1.00E-01	ND					6.40E-02				
Nickel	mg/kg	1.03E+01	1.54E+02	3.00E+01	ND					1.22E+01		YES		
Potassium	mg/kg	8.00E+02	NA	NA	ND					2.80E+02	J			
Selenium	mg/kg	4.80E-01	3.91E+01	8.10E-01	ND					1.40E+00		YES		YES
Sodium	mg/kg	6.34E+02	NA	NA	ND					6.30E+01	B			
Thallium	mg/kg	3.43E+00	5.08E-01	1.00E+00	ND					5.20E-01	B		YES	
Vanadium	mg/kg	5.88E+01	5.31E+01	2.00E+00	1.19E+01				YES	4.07E+01				YES
Zinc	mg/kg	4.06E+01	2.34E+03	5.00E+01	1.12E+01	B				6.21E+01		YES		YES
VOLATILE ORGANIC COMPOUNDS														
1,2,4-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	3.60E-02	J				ND				
1,2-Dimethylbenzene	mg/kg	NA	1.55E+04	5.00E-02	4.10E-02					ND				
1,3,5-Trimethylbenzene	mg/kg	NA	3.88E+02	1.00E-01	1.30E-02	J				ND				
2-Butanone	mg/kg	NA	4.66E+03	8.96E+01	4.00E-03	J				ND				
2-Hexanone	mg/kg	NA	3.11E+02	1.26E+01	4.70E-03	J				ND				
4-Methyl-2-pentanone	mg/kg	NA	6.21E+02	4.43E+02	3.30E-03	J				ND				
Acetone	mg/kg	NA	7.76E+02	2.50E+00	5.20E-02	B				1.40E-02	J			
Benzene	mg/kg	NA	2.17E+01	5.00E-02	ND					ND				
Bromomethane	mg/kg	NA	1.09E+01	NA	3.20E-03	B				ND				
Carbon disulfide	mg/kg	NA	7.77E+02	9.00E-02	4.50E-03	J				ND				
Ethylbenzene	mg/kg	NA	7.77E+02	5.00E-02	2.60E-02					ND				
Methylene chloride	mg/kg	NA	8.41E+01	2.00E+00	5.60E-03	B				4.80E-03	B			
Naphthalene	mg/kg	NA	1.55E+02	1.00E-01	3.10E-03	J				ND				
Toluene	mg/kg	NA	1.55E+03	5.00E-02	3.50E-02					ND				
Trichlorofluoromethane	mg/kg	NA	2.33E+03	1.00E-01	ND					5.50E-03	J			
m,p-Xylenes	mg/kg	NA	1.55E+04	5.00E-02	1.20E-01				YES	ND				
n-Propylbenzene	mg/kg	NA	7.77E+01	NA	7.20E-03	J				ND				

Table 2-1

Surface and Depositional Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-GP26					WS-93-DEP01				
Sample Number					DA0030					WS0001				
Sample Date					23-Oct-98					16-Mar-99				
Sample Depth (Feet)					0- 1					0- 1				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS														
4-Methylphenol	mg/kg	NA	3.88E+01	5.00E-01	ND					ND				
Acenaphthene	mg/kg	7.02E-01	4.63E+02	2.00E+01	ND					ND				
Acenaphthylene	mg/kg	8.91E-01	4.63E+02	6.82E+02	1.50E+00		YES			ND				
Anthracene	mg/kg	9.35E-01	2.33E+03	1.00E-01	1.40E+00		YES		YES	ND				
Benzo(a)anthracene	mg/kg	1.19E+00	8.51E-01	5.21E+00	ND					8.40E-02	J			
Benzo(a)pyrene	mg/kg	1.42E+00	8.51E-02	1.00E-01	ND					ND				
Benzo(b)fluoranthene	mg/kg	1.66E+00	8.51E-01	5.98E+01	ND					1.70E-01	J			
Benzo(ghi)perylene	mg/kg	9.55E-01	2.32E+02	1.19E+02	ND					1.10E-01	J			
Benzo(k)fluoranthene	mg/kg	1.45E+00	8.51E+00	1.48E+02	ND					9.20E-02	J			
Butyl benzyl phthalate	mg/kg	NA	1.56E+03	2.40E-01	ND					ND				
Carbazole	mg/kg	NA	3.11E+01	NA	7.10E-02	J				ND				
Chrysene	mg/kg	1.40E+00	8.61E+01	4.73E+00	1.20E+00					1.00E-01	J			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	2.00E+02	1.80E-01	B				ND				
Dibenz(a,h)anthracene	mg/kg	7.20E-01	8.61E-02	1.84E+01	ND					ND				
Dibenzofuran	mg/kg	NA	3.09E+01	NA	ND					ND				
Diethyl phthalate	mg/kg	NA	6.23E+03	1.00E+02	ND					ND				
Fluoranthene	mg/kg	2.03E+00	3.09E+02	1.00E-01	1.30E-01	J			YES	ND				
Fluorene	mg/kg	6.67E-01	3.09E+02	1.22E+02	7.80E-02	J				ND				
Indeno(1,2,3-cd)pyrene	mg/kg	9.37E-01	8.51E-01	1.09E+02	4.60E-01					1.20E-01	J			
Phenanthrene	mg/kg	1.08E+00	2.32E+03	1.00E-01	ND					ND				
Phenol	mg/kg	NA	4.66E+03	5.00E-02	ND					ND				
Pyrene	mg/kg	1.63E+00	2.33E+02	1.00E-01	6.60E-01				YES	ND				
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	9.30E-01	ND					1.20E-01	B			
PESTICIDES														
4,4'-DDD	mg/kg	NA	2.54E+00	2.50E-03	8.50E-03				YES	ND				
4,4'-DDE	mg/kg	NA	1.79E+00	2.50E-03	ND					ND				
4,4'-DDT	mg/kg	NA	1.79E+00	2.50E-03	1.10E-02				YES	ND				
Endrin ketone	mg/kg	NA	2.32E-01	1.05E-02	ND					ND				
PCBs														
Aroclor 1254	mg/kg	NA	2.93E-01	2.00E-02	ND					ND				

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] Bkg - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in Science Applications International Corporation (1998), *Final Background Metals Survey Report, Fort McClellan, Alabama,* July. For SVOCs, value listed is the background screening value for soils adjacent to asphalt as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

[b] Residential human health site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama,* July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is the estimated concentration.

mg/kg - Milligrams per kilogram

NA - Not available

ND - Not detected

Qual - Data validation qualifier

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP01				FTA-93-GP02				FTA-93-GP03				FTA-93-GP04			
Sample Number				DA0035				DA0036				DA0037				DA0038			
Sample Date				2-Feb-99				2-Feb-99				23-Oct-98				23-Oct-98			
Sample Depth (Feet)				5-8				5-8				8-12				8-12			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	1.36E+04	7.80E+03	3.84E+03				5.00E+03				6.02E+03				6.03E+03			
Arsenic	mg/kg	1.83E+01	4.26E-01	1.60E+00			YES	3.00E+00			YES	1.20E+00			YES	2.70E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	2.56E+01				2.84E+01				3.61E+01				2.88E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	3.50E-01	J			4.00E-01	J			ND				ND			
Calcium	mg/kg	6.37E+02	NA	1.65E+02	J			1.65E+03		YES		6.77E+02	J	YES		ND			
Chromium	mg/kg	3.83E+01	2.32E+01	5.60E+00				7.10E+00				9.40E+00	J			1.16E+01	J		
Cobalt	mg/kg	1.75E+01	4.68E+02	3.10E+00	J			7.90E-01	J			ND				ND			
Copper	mg/kg	1.94E+01	3.13E+02	3.40E+00				4.60E+00				5.40E+00				7.30E+00			
Iron	mg/kg	4.48E+04	2.34E+03	7.49E+03			YES	1.58E+04			YES	5.41E+03			YES	8.87E+03			YES
Lead	mg/kg	3.85E+01	4.00E+02	5.40E+00				5.80E+00				5.10E+00				5.60E+00			
Magnesium	mg/kg	7.66E+02	NA	3.34E+02	J			9.68E+02		YES		ND				ND			
Manganese	mg/kg	1.36E+03	3.63E+02	6.22E+01				7.00E+00				4.47E+01	J			1.17E+01	J		
Mercury	mg/kg	7.00E-02	2.33E+00	3.80E-02				2.40E-02	J			ND				ND			
Nickel	mg/kg	1.29E+01	1.54E+02	2.70E+00	J			1.70E+00	J			ND				ND			
Potassium	mg/kg	7.11E+02	NA	2.08E+02	J			1.80E+02	J			ND				ND			
Selenium	mg/kg	4.70E-01	3.91E+01	ND				9.00E-01		YES		ND				ND			
Sodium	mg/kg	7.02E+02	NA	4.32E+01	B			4.27E+01	B			ND				ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	1.48E+01				1.84E+01				1.21E+01				2.84E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	8.30E+00				8.80E+00				1.23E+01	B			1.47E+01	B		
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	ND				ND				ND				ND			
Acetone	mg/kg	NA	7.76E+02	7.00E-02	B			1.60E-02	B			3.60E-02	B			1.40E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND				ND				1.40E-03	B		
Carbon disulfide	mg/kg	NA	7.77E+02	ND				ND				ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	2.90E-03	B			3.20E-03	B			3.90E-03	B			4.00E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				ND				ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	ND				ND				ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	4.63E+02	4.00E-02	J			ND				ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	4.40E-02	J			ND				ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	7.60E-02	J			ND				ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				ND				2.40E-01	B			2.40E-01	B		
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	4.40E-02	J			ND				ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	6.10E-02	B			7.20E-02	B			8.00E-02	B			8.70E-02	B		
PESTICIDES																			
4,4'-DDE	mg/kg	NA	1.79E+00	2.00E-03	J			ND				ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	1.10E-03	J			ND				ND				ND			
Aldrin	mg/kg	NA	3.65E-02	1.20E-03	J			ND				ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	8.10E-04	J			ND				ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	4.20E-03	J			ND				ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	9.70E-04	J			ND				ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP05				FTA-93-GP06				FTA-93-GP07				FTA-93-GP08			
Sample Number				DA0039				DA0040				DA0041				DA0042			
Sample Date				19-Oct-98				19-Oct-98				19-Oct-98				19-Oct-98			
Sample Depth (Feet)				8-12				8-12				8-12				8-12			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	1.36E+04	7.80E+03	1.42E+04		YES	YES	1.53E+04		YES	YES	2.04E+04		YES	YES	8.32E+03			YES
Arsenic	mg/kg	1.83E+01	4.26E-01	3.20E+00			YES	4.10E+00			YES	1.13E+01			YES	2.70E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	ND				4.93E+01				5.27E+01				4.01E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	1.20E+00		YES		1.50E+00		YES		1.50E+00		YES		ND			
Calcium	mg/kg	6.37E+02	NA	ND				9.63E+02		YES		1.29E+03		YES		ND			
Chromium	mg/kg	3.83E+01	2.32E+01	1.09E+01	J			1.44E+01	J			3.46E+01	J		YES	1.20E+01	J		
Cobalt	mg/kg	1.75E+01	4.68E+02	1.19E+01				9.10E+00				1.42E+01				ND			
Copper	mg/kg	1.94E+01	3.13E+02	3.07E+01		YES		2.97E+01		YES		3.46E+01		YES		7.50E+00			
Iron	mg/kg	4.48E+04	2.34E+03	2.37E+04			YES	2.72E+04			YES	7.16E+04		YES	YES	2.07E+04			YES
Lead	mg/kg	3.85E+01	4.00E+02	2.53E+01				3.03E+01				2.40E+01				9.10E+00			
Magnesium	mg/kg	7.66E+02	NA	4.36E+03		YES		5.51E+03		YES		2.30E+03		YES		7.00E+02			
Manganese	mg/kg	1.36E+03	3.63E+02	1.22E+02				6.46E+01				2.48E+02				1.56E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				ND				ND				ND			
Nickel	mg/kg	1.29E+01	1.54E+02	1.44E+01		YES		1.69E+01		YES		2.01E+01		YES		ND			
Potassium	mg/kg	7.11E+02	NA	5.17E+03		YES		5.33E+03		YES		9.91E+02		YES		ND			
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				1.50E+00		YES		ND			
Sodium	mg/kg	7.02E+02	NA	ND				6.02E+02				7.54E+02		YES		ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	ND				ND				2.02E+01				8.50E+00			
Zinc	mg/kg	3.49E+01	2.34E+03	3.03E+01	B			3.01E+01	B			5.25E+01		YES		1.34E+01	B		
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	ND				ND				ND				ND			
Acetone	mg/kg	NA	7.76E+02	5.60E-02	J			7.30E-02	B			1.40E-02	B			1.60E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND				ND				ND			
Carbon disulfide	mg/kg	NA	7.77E+02	ND				ND				ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	5.00E-03	B			5.40E-03	B			5.30E-03	B			4.90E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				4.80E-03	J			ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	ND				ND				ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	4.63E+02	ND				ND				ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	ND				ND				ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	ND				ND				ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				ND				ND				ND			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	ND				ND				ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	ND				ND				ND				ND			
PESTICIDES																			
4,4'-DDE	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
Aldrin	mg/kg	NA	3.65E-02	ND				ND				ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	ND				ND				ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	ND				ND				ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	ND				ND				ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP09				FTA-93-GP10				FTA-93-GP11				FTA-93-GP12			
Sample Number				DA0043				DA0044				DA0045				DA0046			
Sample Date				19-Oct-98				19-Oct-98				20-Oct-98				20-Oct-98			
Sample Depth (Feet)				8-12				8-12				8-12				8-12			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	1.36E+04	7.80E+03	7.02E+03				3.81E+03				1.71E+04		YES	YES	4.25E+03			
Arsenic	mg/kg	1.83E+01	4.26E-01	1.60E+00			YES	1.30E+00			YES	7.10E+00			YES	5.40E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	7.91E+01				2.68E+01				4.13E+02		YES		2.84E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	ND				ND				2.10E+00		YES		1.20E+00		YES	
Calcium	mg/kg	6.37E+02	NA	ND				ND				9.60E+02		YES		ND			
Chromium	mg/kg	3.83E+01	2.32E+01	1.26E+01	J			6.30E+00	J			2.09E+01				1.15E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	1.20E+01				ND				1.69E+01				ND			
Copper	mg/kg	1.94E+01	3.13E+02	9.40E+00				3.20E+00				4.06E+01		YES		7.70E+00			
Iron	mg/kg	4.48E+04	2.34E+03	1.52E+04			YES	3.44E+03			YES	4.83E+04	J	YES	YES	2.10E+04	J		YES
Lead	mg/kg	3.85E+01	4.00E+02	1.16E+01				4.90E+00				1.74E+01				7.80E+00			
Magnesium	mg/kg	7.66E+02	NA	ND				ND				6.33E+03		YES		ND			
Manganese	mg/kg	1.36E+03	3.63E+02	5.89E+02			YES	2.78E+01				2.75E+02				4.86E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				ND				ND				ND			
Nickel	mg/kg	1.29E+01	1.54E+02	4.70E+00				ND				4.10E+01		YES		ND			
Potassium	mg/kg	7.11E+02	NA	ND				ND				7.59E+02		YES		ND			
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				9.30E-01		YES		8.40E-01		YES	
Sodium	mg/kg	7.02E+02	NA	ND				ND				ND				ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	6.60E+00				7.70E+00				ND				ND			
Zinc	mg/kg	3.49E+01	2.34E+03	1.99E+01	B			8.50E+00	B			9.65E+01	J	YES		1.40E+01	B		
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	ND				ND				ND				ND			
Acetone	mg/kg	NA	7.76E+02	1.30E-02	B			1.30E-02	B			1.70E-02	B			1.40E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND				ND				ND			
Carbon disulfide	mg/kg	NA	7.77E+02	ND				ND				ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	5.30E-03	B			5.00E-03	B			7.50E-03	B			8.90E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				ND				ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	ND				ND				ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	4.63E+02	ND				ND				ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	ND				ND				ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	ND				ND				ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				ND				ND				ND			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	ND				ND				ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	ND				ND				6.30E-02	B			7.50E-02	B		
PESTICIDES																			
4,4'-DDE	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
Aldrin	mg/kg	NA	3.65E-02	ND				ND				ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	ND				ND				ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	ND				ND				ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	ND				ND				ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP13				FTA-93-GP14				FTA-93-GP15				FTA-93-GP16			
Sample Number				DA0047				DA0048				DA0049				DA0050			
Sample Date				16-Oct-98				16-Oct-98				20-Oct-98				20-Oct-98			
Sample Depth (Feet)				9-12				8-12				8-11				8-10			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	1.36E+04	7.80E+03	3.62E+03				6.16E+03				1.04E+04			YES	1.95E+04		YES	YES
Arsenic	mg/kg	1.83E+01	4.26E-01	2.20E+00			YES	2.00E+00			YES	ND				4.40E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	ND				5.72E+01				1.31E+02				3.31E+02		YES	
Beryllium	mg/kg	8.60E-01	9.60E+00	ND				6.10E-01				8.40E-01				2.70E+00		YES	
Calcium	mg/kg	6.37E+02	NA	ND				ND				ND				7.18E+02		YES	
Chromium	mg/kg	3.83E+01	2.32E+01	7.90E+00	J			1.19E+01	J			1.20E+01				2.11E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	ND				ND				6.80E+00				2.98E+01		YES	
Copper	mg/kg	1.94E+01	3.13E+02	6.50E+00				9.40E+00				1.79E+01				4.39E+01		YES	
Iron	mg/kg	4.48E+04	2.34E+03	7.75E+03			YES	1.33E+04			YES	1.33E+04	J		YES	4.96E+04	J	YES	YES
Lead	mg/kg	3.85E+01	4.00E+02	7.10E+00				8.80E+00				9.50E+00				1.62E+01			
Magnesium	mg/kg	7.66E+02	NA	ND				6.52E+02				2.23E+03		YES		8.17E+03		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	4.05E+01				3.75E+01				4.25E+01				3.53E+02			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				ND				ND				ND			
Nickel	mg/kg	1.29E+01	1.54E+02	ND				ND				1.67E+01		YES		5.98E+01		YES	
Potassium	mg/kg	7.11E+02	NA	ND				ND				ND				6.11E+02			
Selenium	mg/kg	4.70E-01	3.91E+01	ND				ND				ND				7.00E-01		YES	
Sodium	mg/kg	7.02E+02	NA	ND				ND				ND				6.76E+02			
Vanadium	mg/kg	6.49E+01	5.31E+01	1.01E+01				9.70E+00				7.00E+00	J			ND			
Zinc	mg/kg	3.49E+01	2.34E+03	1.30E+01	B			1.98E+01	B			5.07E+01	J	YES		1.28E+02	J	YES	
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	ND				ND				ND				ND			
Acetone	mg/kg	NA	7.76E+02	8.30E-03	B			ND				1.50E-02	B			3.00E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND				ND				ND			
Carbon disulfide	mg/kg	NA	7.77E+02	ND				ND				ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	2.80E-03	B			2.10E-03	B			6.60E-03	B			7.70E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				ND				ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	ND				ND				ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	4.63E+02	ND				ND				ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	ND				ND				ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	ND				ND				ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				ND				ND				ND			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	ND				ND				ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	5.80E-02	B			7.00E-02	B			5.50E-02	B			5.90E-02	B		
PESTICIDES																			
4,4'-DDE	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
Aldrin	mg/kg	NA	3.65E-02	ND				ND				ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	ND				ND				ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	ND				ND				ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	ND				ND				ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP17				FTA-93-GP18				FTA-93-GP19				FTA-93-GP20			
Sample Number				DA0051				DA0052				DA0053				DA0054			
Sample Date				20-Oct-98				16-Oct-98				20-Oct-98				20-Oct-98			
Sample Depth (Feet)				8-12				9-12				8-12				8-12			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	1.36E+04	7.80E+03	8.45E+03			YES	4.21E+03				3.92E+03				5.68E+03			
Arsenic	mg/kg	1.83E+01	4.26E-01	2.90E+00			YES	2.70E+00			YES	1.70E+00			YES	ND			
Barium	mg/kg	2.34E+02	5.47E+02	4.04E+01				ND				3.86E+01				4.39E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	6.40E-01				ND				ND				6.30E-01			
Calcium	mg/kg	6.37E+02	NA	ND				ND				ND				ND			
Chromium	mg/kg	3.83E+01	2.32E+01	1.38E+01				1.37E+01	J			1.09E+01				1.28E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	1.89E+01		YES		ND				ND				7.70E+00			
Copper	mg/kg	1.94E+01	3.13E+02	1.95E+01		YES		6.90E+00				5.20E+00				1.25E+01			
Iron	mg/kg	4.48E+04	2.34E+03	1.45E+04	J		YES	1.31E+04			YES	8.16E+03	J		YES	1.21E+04	J		YES
Lead	mg/kg	3.85E+01	4.00E+02	1.07E+01				7.40E+00				4.70E+00				6.50E+00			
Magnesium	mg/kg	7.66E+02	NA	1.73E+03		YES		ND				ND				1.88E+03		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	1.57E+02				3.05E+01				1.54E+01				3.93E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				ND				ND				ND			
Nickel	mg/kg	1.29E+01	1.54E+02	1.76E+01		YES		ND				ND				1.50E+01		YES	
Potassium	mg/kg	7.11E+02	NA	ND				ND				ND				ND			
Selenium	mg/kg	4.70E-01	3.91E+01	6.10E-01		YES		ND				ND				ND			
Sodium	mg/kg	7.02E+02	NA	ND				ND				ND				ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	1.18E+01	J			8.30E+00				9.00E+00	J			ND			
Zinc	mg/kg	3.49E+01	2.34E+03	4.82E+01	J	YES		1.51E+01	B			1.05E+01	B			3.63E+01	J	YES	
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	ND				ND				ND				ND			
Acetone	mg/kg	NA	7.76E+02	2.80E-02	B			ND				1.70E-02	B			1.90E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND				ND				ND			
Carbon disulfide	mg/kg	NA	7.77E+02	ND				ND				ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	5.70E-03	B			2.50E-03	B			5.80E-03	B			6.30E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				ND				ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	ND				ND				ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	4.63E+02	ND				ND				ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	ND				ND				ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	ND				ND				ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				ND				ND				ND			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	ND				ND				ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	7.20E-02	B			5.40E-02	B			6.30E-02	B			7.80E-02	B		
PESTICIDES																			
4,4'-DDE	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
Aldrin	mg/kg	NA	3.65E-02	ND				ND				ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	ND				ND				ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	ND				ND				ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	ND				ND				ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP21				FTA-93-GP22				FTA-93-GP23				FTA-93-GP24			
Sample Number				DA0055				DA0058				DA0061				DA0062			
Sample Date				27-Oct-98				27-Oct-98				20-Oct-98				20-Oct-98			
Sample Depth (Feet)				8-12				8-10				8-12				8-12			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS																			
Aluminum	mg/kg	1.36E+04	7.80E+03	2.27E+03				8.07E+03			YES	1.74E+04		YES	YES	8.43E+03			YES
Arsenic	mg/kg	1.83E+01	4.26E-01	1.30E+00	J		YES	1.70E+00			YES	3.80E+00			YES	3.00E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	2.55E+01				1.09E+02				4.03E+02		YES		1.60E+02			
Beryllium	mg/kg	8.60E-01	9.60E+00	ND				9.60E-01		YES		3.10E+00		YES		9.40E-01		YES	
Calcium	mg/kg	6.37E+02	NA	ND				7.82E+02	J	YES		3.02E+03		YES		7.01E+02		YES	
Chromium	mg/kg	3.83E+01	2.32E+01	8.20E+00	J			1.11E+01	J			2.17E+01				1.52E+01			
Cobalt	mg/kg	1.75E+01	4.68E+02	ND				8.30E+00				1.76E+01		YES		7.00E+00			
Copper	mg/kg	1.94E+01	3.13E+02	3.90E+00	J			1.02E+01				3.91E+01		YES		9.90E+00			
Iron	mg/kg	4.48E+04	2.34E+03	3.98E+03	J		YES	1.29E+04			YES	2.66E+04	J		YES	2.08E+04	J		YES
Lead	mg/kg	3.85E+01	4.00E+02	3.20E+00				1.25E+01				1.80E+01				1.22E+01			
Magnesium	mg/kg	7.66E+02	NA	ND				8.06E+02	J	YES		4.78E+03		YES		1.50E+03		YES	
Manganese	mg/kg	1.36E+03	3.63E+02	3.58E+01	J			1.66E+02	J			4.16E+01				1.38E+01			
Mercury	mg/kg	7.00E-02	2.33E+00	ND				5.80E-02				ND				6.10E-02			
Nickel	mg/kg	1.29E+01	1.54E+02	ND				8.70E+00				4.62E+01		YES		8.30E+00			
Potassium	mg/kg	7.11E+02	NA	ND				ND				8.12E+02		YES		ND			
Selenium	mg/kg	4.70E-01	3.91E+01	ND				7.40E-01		YES		1.00E+00		YES		5.90E-01		YES	
Sodium	mg/kg	7.02E+02	NA	ND				ND				6.02E+02				ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	8.70E+00				1.16E+01				1.15E+01	J			3.35E+01	J		
Zinc	mg/kg	3.49E+01	2.34E+03	1.14E+01	B			2.56E+01	B			8.05E+01	J	YES		1.46E+01	B		
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	4.66E+03	4.90E-03	J			7.50E-03	J			ND				ND			
Acetone	mg/kg	NA	7.76E+02	4.20E-02	B			6.10E-02	J			1.10E-02	B			1.00E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND				ND				ND			
Carbon disulfide	mg/kg	NA	7.77E+02	ND				3.20E-03	J			ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	4.00E-03	B			7.50E-03	B			4.80E-03	B			4.60E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				ND				ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	7.60E-02	J			1.60E-02	J			ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	4.63E+02	ND				ND				ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	ND				ND				ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	ND				ND				ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				ND				ND				ND			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	ND				ND				ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	ND				6.40E-02	J			6.80E-02	B			1.30E-01	B		
PESTICIDES																			
4,4'-DDE	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	ND				ND				ND				ND			
Aldrin	mg/kg	NA	3.65E-02	ND				ND				ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	ND				ND				ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	ND				ND				ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	ND				ND				ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP25				FTA-93-GP26			
Sample Number				DA0063				DA0066			
Sample Date				20-Oct-98				23-Oct-98			
Sample Depth (Feet)				8-12				12-16			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS											
Aluminum	mg/kg	1.36E+04	7.80E+03	1.94E+04		YES	YES	6.68E+03			
Arsenic	mg/kg	1.83E+01	4.26E-01	4.40E+00			YES	2.50E+00			YES
Barium	mg/kg	2.34E+02	5.47E+02	1.45E+02				4.58E+01			
Beryllium	mg/kg	8.60E-01	9.60E+00	1.40E+00		YES		ND			
Calcium	mg/kg	6.37E+02	NA	1.51E+03		YES		ND			
Chromium	mg/kg	3.83E+01	2.32E+01	2.14E+01				1.48E+01	J		
Cobalt	mg/kg	1.75E+01	4.68E+02	2.32E+01		YES		ND			
Copper	mg/kg	1.94E+01	3.13E+02	4.68E+01		YES		1.02E+01			
Iron	mg/kg	4.48E+04	2.34E+03	4.38E+04	J		YES	9.85E+03			YES
Lead	mg/kg	3.85E+01	4.00E+02	2.07E+01				1.51E+01			
Magnesium	mg/kg	7.66E+02	NA	8.55E+03		YES		ND			
Manganese	mg/kg	1.36E+03	3.63E+02	4.45E+02			YES	4.20E+01	J		
Mercury	mg/kg	7.00E-02	2.33E+00	ND				ND			
Nickel	mg/kg	1.29E+01	1.54E+02	4.42E+01		YES		ND			
Potassium	mg/kg	7.11E+02	NA	ND				ND			
Selenium	mg/kg	4.70E-01	3.91E+01	1.20E+00		YES		ND			
Sodium	mg/kg	7.02E+02	NA	ND				ND			
Vanadium	mg/kg	6.49E+01	5.31E+01	ND				1.70E+01			
Zinc	mg/kg	3.49E+01	2.34E+03	1.20E+02	J	YES		1.48E+01	B		
VOLATILE ORGANIC COMPOUNDS											
2-Butanone	mg/kg	NA	4.66E+03	ND				ND			
Acetone	mg/kg	NA	7.76E+02	2.00E-02	B			1.20E-02	B		
Bromomethane	mg/kg	NA	1.09E+01	ND				ND			
Carbon disulfide	mg/kg	NA	7.77E+02	ND				ND			
Methylene chloride	mg/kg	NA	8.41E+01	5.40E-03	B			7.30E-03	B		
Naphthalene	mg/kg	NA	1.55E+02	ND				ND			
p-Cymene	mg/kg	NA	1.55E+03	ND				ND			
SEMIVOLATILE ORGANIC COMPOUNDS											
Acenaphthylene	mg/kg	NA	4.63E+02	ND				ND			
Benzo(a)pyrene	mg/kg	NA	8.51E-02	ND				ND			
Benzo(ghi)perylene	mg/kg	NA	2.32E+02	ND				ND			
Di-n-butyl phthalate	mg/kg	NA	7.80E+02	ND				2.00E-01	B		
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.51E-01	ND				ND			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	4.52E+01	6.10E-02	B			6.20E-02	B		
PESTICIDES											
4,4'-DDE	mg/kg	NA	1.79E+00	ND				ND			
4,4'-DDT	mg/kg	NA	1.79E+00	ND				ND			
Aldrin	mg/kg	NA	3.65E-02	ND				ND			
Heptachlor	mg/kg	NA	1.40E-01	ND				ND			
beta-BHC	mg/kg	NA	3.50E-01	ND				ND			
delta-BHC	mg/kg	NA	2.33E+00	ND				ND			

Table 2-2

Subsurface Soil Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Analyses performed by using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] Bkg - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in Science Applications International Corporation (1998), *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] Residential human health site-specific screening level (SSSL) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is the estimated concentration.

mg/kg - Milligrams per kilogram

NA - Not available

ND - Not detected

Qual - Data validation qualifier

Table 2-3

Groundwater Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP10				FTA-93-GP11				FTA-93-GP18			
Sample Number				DA3001				DA3002				DA3003			
Sample Date				13-Jan-99				14-Jan-99				27-Oct-98			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/L	2.34E+00	1.56E+00	5.90E+00		YES	YES	2.19E+00			YES	1.28E+01	J	YES	YES
Arsenic	mg/L	1.78E-02	4.00E-05	3.30E-03	J		YES	ND				ND			
Barium	mg/L	1.27E-01	1.10E-01	1.19E-01	J		YES	4.60E-02	J			ND			
Beryllium	mg/L	1.24E-03	3.12E-03	6.40E-04	J			ND				ND			
Calcium	mg/L	5.65E+01	NA	1.60E+01				3.17E+01				ND			
Chromium	mg/L	NA	4.69E-03	6.80E-03	J		YES	4.60E-03	J			2.75E-02			YES
Cobalt	mg/L	2.34E-02	9.39E-02	7.90E-03	J			1.12E-02	J			ND			
Copper	mg/L	2.55E-02	6.26E-02	4.60E-03	J			ND				ND			
Iron	mg/L	7.04E+00	4.69E-01	2.15E+01		YES	YES	2.03E+00			YES	1.78E+01		YES	YES
Lead	mg/L	7.99E-03	1.50E-02	3.00E-03	B			1.80E-03	B			1.05E-02		YES	
Magnesium	mg/L	2.13E+01	NA	6.28E+00				3.50E+01		YES		ND			
Manganese	mg/L	5.81E-01	7.35E-02	2.58E+00		YES	YES	2.10E+00		YES	YES	6.62E-01		YES	YES
Mercury	mg/L	NA	4.60E-04	4.90E-05	J			5.50E-05	J			ND			
Nickel	mg/L	NA	3.13E-02	1.01E-02	J			1.16E-02	J			ND			
Potassium	mg/L	7.20E+00	NA	1.86E+00	J			2.90E+00	J			ND			
Selenium	mg/L	NA	7.82E-03	ND				ND				ND			
Sodium	mg/L	1.48E+01	NA	7.31E+00				1.24E+02		YES		1.52E+01	J	YES	
Thallium	mg/L	1.45E-03	1.00E-04	ND				ND				ND			
Vanadium	mg/L	1.70E-02	1.10E-02	1.04E-02	J			ND				ND			
Zinc	mg/L	2.20E-01	4.69E-01	2.68E-02				1.17E-02	J			6.55E-02	B		
VOLATILE ORGANIC COMPOUNDS															
1,1,2,2-Tetrachloroethane	mg/L	NA	2.00E-04	2.20E-03			YES	ND				ND			
1,2,4-Trimethylbenzene	mg/L	NA	6.00E-03	ND				2.20E-04	J			ND			
1,2-Dimethylbenzene	mg/L	NA	2.80E+00	ND				ND				ND			
1,3,5-Trimethylbenzene	mg/L	NA	6.00E-03	ND				ND				ND			
Acetone	mg/L	NA	1.56E-01	ND				ND				3.20E-03	B		
Benzene	mg/L	NA	1.40E-03	1.20E-03				ND				ND			
Bromomethane	mg/L	NA	2.17E-03	1.00E-04	J			2.10E-04	J			ND			
Carbon disulfide	mg/L	NA	1.51E-01	ND				ND				2.30E-04	J		
Chloromethane	mg/L	NA	3.92E-03	ND				1.80E-04	J			ND			
Ethylbenzene	mg/L	NA	1.40E-01	ND				ND				ND			
Naphthalene	mg/L	NA	3.00E-03	6.80E-04	J			2.50E-04	J			ND			
Toluene	mg/L	NA	2.59E-01	ND				1.40E-04	J			ND			
Trichloroethene	mg/L	NA	4.50E-03	3.50E-03				ND				ND			
Vinyl chloride	mg/L	NA	3.00E-05	2.80E-04	J		YES	ND				ND			
cis-1,2-Dichloroethene	mg/L	NA	1.55E-02	3.80E-03				ND				ND			
m,p-Xylenes	mg/L	NA	2.80E+00	ND				ND				ND			
n-Propylbenzene	mg/L	NA	1.30E-02	ND				ND				ND			
p-Cymene	mg/L	NA	2.26E-01	ND				ND				ND			
sec-Butylbenzene	mg/L	NA	1.06E-02	1.80E-03				ND				ND			
tert-Butylbenzene	mg/L	NA	1.14E-02	1.10E-03				ND				ND			
trans-1,2-Dichloroethene	mg/L	NA	3.07E-02	1.50E-03				ND				ND			

Table 2-3

Groundwater Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP10				FTA-93-GP11				FTA-93-GP18			
Sample Number				DA3001				DA3002				DA3003			
Sample Date				13-Jan-99				14-Jan-99				27-Oct-98			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS															
2,6-Dinitrotoluene	mg/L	NA	9.00E-05	ND				ND				4.80E-03	J		YES
4-Methylphenol	mg/L	NA	7.68E-03	ND				ND				1.30E-03	J		
Di-n-butyl phthalate	mg/L	NA	1.48E-01	ND				ND				1.10E-03	J		
Diethyl phthalate	mg/L	NA	1.23E+00	ND				ND				4.80E-03	J		
Phenol	mg/L	NA	9.31E-01	ND				ND				7.80E-03	B		
bis(2-Ethylhexyl)phthalate	mg/L	NA	4.30E-03	ND				ND				ND			
HERBICIDES															
2,2-Dichloropropanoic Acid	mg/L	NA	4.68E-02	2.40E-03				4.80E-03				ND			

Table 2-3

Groundwater Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP19				FTA-93-GP21				FTA-93-GP22			
Sample Number				DA3004				DA3005				DA3008			
Sample Date				26-Oct-98				28-Oct-98				28-Oct-98			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/L	2.34E+00	1.56E+00	1.94E+00	J		YES	7.49E+00	J	YES	YES	4.49E+00	J	YES	YES
Arsenic	mg/L	1.78E-02	4.00E-05	ND				ND				ND			
Barium	mg/L	1.27E-01	1.10E-01	ND				ND				ND			
Beryllium	mg/L	1.24E-03	3.12E-03	ND				ND				ND			
Calcium	mg/L	5.65E+01	NA	6.71E+00	J			1.60E+01	J			1.44E+01	J		
Chromium	mg/L	NA	4.69E-03	ND				1.01E-02			YES	ND			
Cobalt	mg/L	2.34E-02	9.39E-02	ND				ND				ND			
Copper	mg/L	2.55E-02	6.26E-02	ND				ND				ND			
Iron	mg/L	7.04E+00	4.69E-01	6.03E+00			YES	2.95E+01		YES	YES	1.59E+01		YES	YES
Lead	mg/L	7.99E-03	1.50E-02	ND				4.50E-03				3.60E-03			
Magnesium	mg/L	2.13E+01	NA	6.58E+00	J			9.07E+00	J			7.44E+00	J		
Manganese	mg/L	5.81E-01	7.35E-02	6.72E-01		YES	YES	1.33E+00		YES	YES	8.01E-01		YES	YES
Mercury	mg/L	NA	4.60E-04	ND				ND				ND			
Nickel	mg/L	NA	3.13E-02	ND				ND				ND			
Potassium	mg/L	7.20E+00	NA	ND				ND				ND			
Selenium	mg/L	NA	7.82E-03	ND				ND				ND			
Sodium	mg/L	1.48E+01	NA	1.00E+01	J			1.83E+01	J	YES		1.01E+01	J		
Thallium	mg/L	1.45E-03	1.00E-04	ND				ND				ND			
Vanadium	mg/L	1.70E-02	1.10E-02	ND				ND				ND			
Zinc	mg/L	2.20E-01	4.69E-01	ND				ND				ND			
VOLATILE ORGANIC COMPOUNDS															
1,1,2,2-Tetrachloroethane	mg/L	NA	2.00E-04	ND				ND				ND			
1,2,4-Trimethylbenzene	mg/L	NA	6.00E-03	ND				ND				ND			
1,2-Dimethylbenzene	mg/L	NA	2.80E+00	ND				ND				ND			
1,3,5-Trimethylbenzene	mg/L	NA	6.00E-03	ND				ND				ND			
Acetone	mg/L	NA	1.56E-01	3.80E-03	B			4.60E-03	B			2.60E-03	B		
Benzene	mg/L	NA	1.40E-03	ND				ND				ND			
Bromomethane	mg/L	NA	2.17E-03	1.00E-04	J			ND				ND			
Carbon disulfide	mg/L	NA	1.51E-01	ND				ND				ND			
Chloromethane	mg/L	NA	3.92E-03	ND				ND				ND			
Ethylbenzene	mg/L	NA	1.40E-01	ND				ND				ND			
Naphthalene	mg/L	NA	3.00E-03	ND				ND				ND			
Toluene	mg/L	NA	2.59E-01	ND				2.50E-04	J			ND			
Trichloroethene	mg/L	NA	4.50E-03	ND				ND				ND			
Vinyl chloride	mg/L	NA	3.00E-05	ND				ND				3.40E-04	J		YES
cis-1,2-Dichloroethene	mg/L	NA	1.55E-02	ND				ND				2.80E-04	J		
m,p-Xylenes	mg/L	NA	2.80E+00	ND				ND				ND			
n-Propylbenzene	mg/L	NA	1.30E-02	ND				ND				ND			
p-Cymene	mg/L	NA	2.26E-01	ND				4.20E-02				ND			
sec-Butylbenzene	mg/L	NA	1.06E-02	ND				ND				ND			
tert-Butylbenzene	mg/L	NA	1.14E-02	ND				ND				ND			
trans-1,2-Dichloroethene	mg/L	NA	3.07E-02	ND				ND				ND			

Table 2-3

Groundwater Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP19				FTA-93-GP21				FTA-93-GP22			
Sample Number				DA3004				DA3005				DA3008			
Sample Date				26-Oct-98				28-Oct-98				28-Oct-98			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS															
2,6-Dinitrotoluene	mg/L	NA	9.00E-05	ND				ND				ND			
4-Methylphenol	mg/L	NA	7.68E-03	ND				ND				ND			
Di-n-butyl phthalate	mg/L	NA	1.48E-01	ND				ND				ND			
Diethyl phthalate	mg/L	NA	1.23E+00	ND				ND				ND			
Phenol	mg/L	NA	9.31E-01	4.20E-03	B			5.10E-03	B			4.50E-03	B		
bis(2-Ethylhexyl)phthalate	mg/L	NA	4.30E-03	1.20E-03	J			ND				ND			
HERBICIDES															
2,2-Dichloropropanoic Acid	mg/L	NA	4.68E-02	ND				ND				ND			

Table 2-3

Groundwater Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP23				FTA-93-GP24				FTA-93-GP26			
Sample Number				DA3009				DA3010				DA3011			
Sample Date				12-Jan-99				13-Jan-99				29-Oct-98			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
METALS															
Aluminum	mg/L	2.34E+00	1.56E+00	2.16E+02		YES	YES	1.35E+00				8.96E+01	J	YES	YES
Arsenic	mg/L	1.78E-02	4.00E-05	3.05E-02		YES	YES	ND				1.37E-02			YES
Barium	mg/L	1.27E-01	1.10E-01	1.26E+00		YES	YES	8.06E-02	J			4.31E-01		YES	YES
Beryllium	mg/L	1.24E-03	3.12E-03	1.36E-02		YES	YES	ND				ND			
Calcium	mg/L	5.65E+01	NA	7.51E+01		YES		4.50E+01				ND			
Chromium	mg/L	NA	4.69E-03	2.73E-01			YES	ND				1.22E-01			YES
Cobalt	mg/L	2.34E-02	9.39E-02	3.68E-02	J	YES		ND				ND			
Copper	mg/L	2.55E-02	6.26E-02	1.50E-01		YES	YES	ND				7.24E-02		YES	YES
Iron	mg/L	7.04E+00	4.69E-01	2.85E+02		YES	YES	1.12E+00			YES	6.58E+01		YES	YES
Lead	mg/L	7.99E-03	1.50E-02	1.14E-01		YES	YES	ND				7.14E-02		YES	YES
Magnesium	mg/L	2.13E+01	NA	1.45E+02		YES		3.48E+01		YES		8.53E+00	J		
Manganese	mg/L	5.81E-01	7.35E-02	1.27E+00		YES	YES	1.06E-01			YES	1.34E-01			YES
Mercury	mg/L	NA	4.60E-04	2.40E-04				1.00E-04	J			ND			
Nickel	mg/L	NA	3.13E-02	3.42E-01			YES	ND				5.48E-02			YES
Potassium	mg/L	7.20E+00	NA	4.36E+01		YES		3.46E+00	J			6.84E+00			
Selenium	mg/L	NA	7.82E-03	9.30E-03			YES	ND				ND			
Sodium	mg/L	1.48E+01	NA	1.46E+02		YES		4.78E+01		YES		2.22E+01	J	YES	
Thallium	mg/L	1.45E-03	1.00E-04	8.80E-03	B	YES	YES	ND				ND			
Vanadium	mg/L	1.70E-02	1.10E-02	2.97E-01		YES	YES	ND				1.45E-01		YES	YES
Zinc	mg/L	2.20E-01	4.69E-01	5.59E-01		YES	YES	ND				1.76E-01	B		
VOLATILE ORGANIC COMPOUNDS															
1,1,2,2-Tetrachloroethane	mg/L	NA	2.00E-04	ND				ND				ND			
1,2,4-Trimethylbenzene	mg/L	NA	6.00E-03	ND				ND				2.30E-03			
1,2-Dimethylbenzene	mg/L	NA	2.80E+00	ND				ND				3.50E-03			
1,3,5-Trimethylbenzene	mg/L	NA	6.00E-03	ND				ND				6.10E-04	J		
Acetone	mg/L	NA	1.56E-01	5.60E-03	B			6.30E-02	J			4.30E-03	B		
Benzene	mg/L	NA	1.40E-03	ND				ND				ND			
Bromomethane	mg/L	NA	2.17E-03	1.50E-04	J			ND				ND			
Carbon disulfide	mg/L	NA	1.51E-01	ND				ND				ND			
Chloromethane	mg/L	NA	3.92E-03	1.80E-04	J			ND				ND			
Ethylbenzene	mg/L	NA	1.40E-01	ND				ND				2.00E-03			
Naphthalene	mg/L	NA	3.00E-03	ND				ND				ND			
Toluene	mg/L	NA	2.59E-01	ND				ND				3.20E-03			
Trichloroethene	mg/L	NA	4.50E-03	ND				ND				ND			
Vinyl chloride	mg/L	NA	3.00E-05	ND				ND				ND			
cis-1,2-Dichloroethene	mg/L	NA	1.55E-02	ND				ND				ND			
m,p-Xylenes	mg/L	NA	2.80E+00	ND				ND				1.00E-02			
n-Propylbenzene	mg/L	NA	1.30E-02	ND				ND				2.60E-04	J		
p-Cymene	mg/L	NA	2.26E-01	ND				ND				ND			
sec-Butylbenzene	mg/L	NA	1.06E-02	ND				ND				ND			
tert-Butylbenzene	mg/L	NA	1.14E-02	ND				ND				ND			
trans-1,2-Dichloroethene	mg/L	NA	3.07E-02	ND				ND				ND			

Table 2-3

Groundwater Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location				FTA-93-GP23				FTA-93-GP24				FTA-93-GP26			
Sample Number				DA3009				DA3010				DA3011			
Sample Date				12-Jan-99				13-Jan-99				29-Oct-98			
Parameter	Units	BKG[a]	SSSL[b]	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL	Result	Qual	>BKG	>SSSL
SEMIVOLATILE ORGANIC COMPOUNDS															
2,6-Dinitrotoluene	mg/L	NA	9.00E-05	ND				ND				ND			
4-Methylphenol	mg/L	NA	7.68E-03	ND				ND				ND			
Di-n-butyl phthalate	mg/L	NA	1.48E-01	ND				ND				ND			
Diethyl phthalate	mg/L	NA	1.23E+00	ND				ND				ND			
Phenol	mg/L	NA	9.31E-01	1.40E-03	B			ND				7.50E-03	B		
bis(2-Ethylhexyl)phthalate	mg/L	NA	4.30E-03	ND				ND				ND			
HERBICIDES															
2,2-Dichloropropanoic Acid	mg/L	NA	4.68E-02	ND				ND				ND			

Analyses performed by using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] Bkg - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in Science Applications International Corporation (1998), *Final Background Metals Survey Report, Fort McClellan, Alabama*, July.

[b] Residential human health site-specific screening level (SSSL) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama*, July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is the estimated concentration.

mg/L - Milligrams per liter

NA - Not available

ND - Not detected

Qual - Data validation qualifier

Table 2-4

Surface Water Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-SW/SD01					FTA-93-SW/SD02					FTA-93-SW/SD03				
Sample Number					DA2001					DA2002					DA2003				
Sample Date					27-Jan-99					22-Oct-98					27-Jan-99				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/L	5.26E+00	1.53E+01	8.70E-02	1.72E+00				YES	2.85E-01	J			YES	2.34E-01				YES
Arsenic	mg/L	2.10E-03	7.30E-04	1.90E-01	ND					ND					3.20E-03	J	YES	YES	
Barium	mg/L	7.53E-02	1.10E+00	3.90E-03	1.28E-02	J			YES	ND					3.00E-02	J			YES
Calcium	mg/L	2.52E+01	NA	1.16E+02	1.83E+01					1.88E+01	J				1.37E+01				
Iron	mg/L	1.96E+01	4.70E+00	1.00E+00	5.77E-01					4.99E+00			YES	YES	3.02E+00				YES
Magnesium	mg/L	1.10E+01	NA	8.20E+01	4.73E+00	J				ND					3.09E+00	J			
Manganese	mg/L	5.65E-01	6.40E-01	8.00E-02	5.19E-02					1.32E+00		YES	YES	YES	1.43E+00		YES	YES	YES
Mercury	mg/L	NA	4.25E-03	1.00E-05	7.40E-05	J			YES	ND					5.70E-05	J			YES
Potassium	mg/L	2.56E+00	NA	5.30E+01	2.22E+00	J				ND					3.03E+00	J	YES		
Sodium	mg/L	3.44E+00	NA	6.80E+02	1.02E+00	B				ND					1.06E+00	B			
Thallium	mg/L	2.40E-03	1.01E-03	4.00E-03	4.50E-03	B	YES	YES	YES	ND					4.10E-03	B	YES	YES	YES
Zinc	mg/L	4.03E-02	4.65E+00	5.89E-02	3.22E-02					ND					3.67E-02				
VOLATILE ORGANIC COMPOUNDS																			
1,2,3-Trichlorobenzene	mg/L	NA	7.91E-03	6.92E-02	3.60E-04	J				ND					ND				
1,2,4-Trichlorobenzene	mg/L	NA	8.37E-02	4.49E-02	2.60E-04	J				ND					ND				
Acetone	mg/L	NA	1.57E+00	7.80E+01	5.80E-03	J				3.20E-03	B				8.50E-03	J			
Bromodichloromethane	mg/L	NA	1.70E-02	1.10E+01	ND					ND					ND				
Chloroform	mg/L	NA	1.69E-01	2.89E-01	ND					ND					ND				
Dibromochloromethane	mg/L	NA	1.27E-02	6.40E+00	ND					ND					ND				
Hexachlorobutadiene	mg/L	NA	1.28E-02	9.30E-04	2.10E-04	J				ND					ND				
Methylene chloride	mg/L	NA	1.42E-01	1.93E+00	8.90E-04	B				ND					7.50E-04	B			
Toluene	mg/L	NA	2.32E+00	1.75E-01	ND					1.20E-04	B				ND				
Trichloroethene	mg/L	NA	8.80E-02	2.19E+01	ND					ND					ND				
cis-1,2-Dichloroethene	mg/L	NA	1.49E-01	1.16E+01	ND					ND					ND				
SEMIVOLATILE ORGANIC COMPOUNDS																			
Phenol	mg/L	NA	9.06E+00	2.56E-01	ND					5.00E-03	B				ND				
bis(2-Ethylhexyl)phthalate	mg/L	NA	5.17E-02	3.00E-04	ND					ND					ND				
HERBICIDES																			
2,2-Dichloropropanoic Acid	mg/L	NA	4.69E-01	NA	ND					2.00E-03					ND				

Table 2-4

Surface Water Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-SW/SD04					FTA-93-SW/SD05					FTA-93-SW/SD06				
Sample Number					DA2004					DA2005					DA2008				
Sample Date					23-Oct-98					22-Oct-98					22-Oct-98				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/L	5.26E+00	1.53E+01	8.70E-02	ND					ND					ND				
Arsenic	mg/L	2.10E-03	7.30E-04	1.90E-01	ND					ND					ND				
Barium	mg/L	7.53E-02	1.10E+00	3.90E-03	ND					ND					ND				
Calcium	mg/L	2.52E+01	NA	1.16E+02	2.38E+01	J				2.54E+01	J	YES			1.85E+01	J			
Iron	mg/L	1.96E+01	4.70E+00	1.00E+00	1.81E+00				YES	2.49E+00	J			YES	1.79E-01				
Magnesium	mg/L	1.10E+01	NA	8.20E+01	1.14E+01	J	YES			1.15E+01	J	YES			9.38E+00	J			
Manganese	mg/L	5.65E-01	6.40E-01	8.00E-02	4.81E-02					4.73E-01				YES	2.97E-02				
Mercury	mg/L	NA	4.25E-03	1.00E-05	ND					ND					ND				
Potassium	mg/L	2.56E+00	NA	5.30E+01	ND					ND					ND				
Sodium	mg/L	3.44E+00	NA	6.80E+02	ND					ND					ND				
Thallium	mg/L	2.40E-03	1.01E-03	4.00E-03	ND					ND					ND				
Zinc	mg/L	4.03E-02	4.65E+00	5.89E-02	ND					ND					ND				
VOLATILE ORGANIC COMPOUNDS																			
1,2,3-Trichlorobenzene	mg/L	NA	7.91E-03	6.92E-02	ND					ND					ND				
1,2,4-Trichlorobenzene	mg/L	NA	8.37E-02	4.49E-02	ND					ND					ND				
Acetone	mg/L	NA	1.57E+00	7.80E+01	1.50E-03	B				1.70E-03	B				1.70E-03	B			
Bromodichloromethane	mg/L	NA	1.70E-02	1.10E+01	4.30E-04	J				ND					ND				
Chloroform	mg/L	NA	1.69E-01	2.89E-01	1.50E-03					ND					ND				
Dibromochloromethane	mg/L	NA	1.27E-02	6.40E+00	2.70E-04	J				ND					ND				
Hexachlorobutadiene	mg/L	NA	1.28E-02	9.30E-04	ND					ND					ND				
Methylene chloride	mg/L	NA	1.42E-01	1.93E+00	ND					ND					ND				
Toluene	mg/L	NA	2.32E+00	1.75E-01	ND					ND					ND				
Trichloroethene	mg/L	NA	8.80E-02	2.19E+01	1.50E-03					1.10E-04	J				ND				
cis-1,2-Dichloroethene	mg/L	NA	1.49E-01	1.16E+01	1.80E-04	J				ND					ND				
SEMIVOLATILE ORGANIC COMPOUNDS																			
Phenol	mg/L	NA	9.06E+00	2.56E-01	6.70E-03	B				5.30E-03	B				6.00E-03	B			
bis(2-Ethylhexyl)phthalate	mg/L	NA	5.17E-02	3.00E-04	ND					ND					4.20E-02				YES
HERBICIDES																			
2,2-Dichloropropanoic Acid	mg/L	NA	4.69E-01	NA	ND					ND					ND				

Table 2-4

Surface Water Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Analyses performed by using U.S. Environmental Protection Agency (EPA) SW-846analytical methods.

[a] Bkg - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in Science Applications International Corporation (1998), *Final Background Metals Survey Report, Fort McClellan, Alabama,* July.

[b] Recreational site user site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama,* July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively identified; reported value is the estimated concentration.

mg/L - Milligrams per liter

NA - Not available

ND - Not detected

Qual - Data validation qualifier

Table 2-5

Sediment Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-SW/SD01					FTA-93-SW/SD02					FTA-93-SW/SD03				
Sample Number					DA1001					DA1002					DA1003				
Sample Date					27-Jan-99					22-Oct-98					27-Jan-99				
Sample Depth (Feet)					0- .5					0- 0.5					0- 0.5				
Parameter	**Units**	**BKG[a]**	**SSSL[b]**	**ESV[b]**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**
METALS																			
Aluminum	mg/kg	8.59E+03	1.15E+06	NA	8.01E+03					1.01E+04		YES			1.05E+04		YES		
Arsenic	mg/kg	1.13E+01	5.58E+01	7.24E+00	9.90E+00				YES	1.01E+01				YES	1.60E+01		YES		YES
Barium	mg/kg	9.89E+01	8.36E+04	NA	3.96E+01					5.72E+01					6.38E+01				
Beryllium	mg/kg	9.70E-01	1.50E+02	NA	6.30E-01	J				1.10E+00		YES			1.00E+00		YES		
Cadmium	mg/kg	4.30E-01	1.71E+02	1.00E+00	ND					ND					ND				
Calcium	mg/kg	1.11E+03	NA	NA	1.41E+03		YES			1.82E+03	J	YES			8.67E+02				
Chromium	mg/kg	3.12E+01	2.79E+03	5.23E+01	3.13E+01		YES			2.34E+01	J				3.27E+01		YES		
Cobalt	mg/kg	1.10E+01	6.72E+04	5.00E+01	6.30E+00	J				ND					8.00E+00				
Copper	mg/kg	1.71E+01	4.74E+04	1.87E+01	9.20E+00					1.88E+01		YES		YES	1.66E+01				
Iron	mg/kg	3.53E+04	3.59E+05	NA	3.02E+04					3.45E+04					4.84E+04		YES		
Lead	mg/kg	3.78E+01	4.00E+02	3.02E+01	2.51E+01					4.52E+01		YES		YES	3.83E+01		YES		YES
Magnesium	mg/kg	9.06E+02	NA	NA	4.41E+02	J				ND					3.77E+02	J			
Manganese	mg/kg	7.12E+02	4.38E+04	NA	6.87E+02					2.70E+02	J				4.65E+02				
Mercury	mg/kg	1.10E-01	2.99E+02	1.30E-01	7.40E-02					8.80E-02					1.00E-01				
Nickel	mg/kg	1.30E+01	1.76E+04	1.59E+01	6.90E+00					1.18E+01					1.13E+01				
Potassium	mg/kg	1.01E+03	NA	NA	3.74E+02	J				ND					4.08E+02	J			
Selenium	mg/kg	7.20E-01	5.96E+03	NA	1.60E+00	B	YES			1.50E+00		YES			2.00E+00	B	YES		
Sodium	mg/kg	6.92E+02	NA	NA	1.07E+02	B				ND					8.57E+01	B			
Vanadium	mg/kg	4.09E+01	4.83E+03	NA	3.76E+01					2.52E+01					5.55E+01		YES		
Zinc	mg/kg	5.27E+01	3.44E+05	1.24E+02	1.02E+02		YES			6.40E+01		YES			5.30E+01		YES		
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	6.23E+05	1.37E-01	ND					6.40E-03	J				7.20E-03	J			
Acetone	mg/kg	NA	1.03E+05	4.53E-01	1.80E-02	J				1.10E-01	J				5.90E-02	J			
Carbon disulfide	mg/kg	NA	1.04E+05	1.34E-01	ND					6.90E-03	J				ND				
Chloroethane	mg/kg	NA	2.54E+04	5.86E+01	ND					ND					3.60E-03	J			
Methylene chloride	mg/kg	NA	9.84E+03	1.26E+00	8.10E-03	B				1.90E-02	B				7.70E-03	B			
Toluene	mg/kg	NA	2.11E+05	6.70E-01	ND					ND					ND				
Trichloroethene	mg/kg	NA	6.61E+03	1.80E-01	ND					ND					ND				
Trichlorofluoromethane	mg/kg	NA	3.06E+05	3.07E-03	4.00E-03	J			YES	ND					ND				
p-Cymene	mg/kg	NA	2.08E+05	NA	ND					ND					ND				

Table 2-5

Sediment Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-SW/SD01					FTA-93-SW/SD02					FTA-93-SW/SD03				
Sample Number					DA1001					DA1002					DA1003				
Sample Date					27-Jan-99					22-Oct-98					27-Jan-99				
Sample Depth (Feet)					0- .5					0- 0.5					0- 0.5				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	5.59E+04	3.30E-01	1.10E-01	J				3.70E-01	J			YES	1.20E-01	J			
Anthracene	mg/kg	NA	2.99E+05	3.30E-01	1.00E-01	J				2.70E-01	J				1.00E-01	J			
Benzo(a)anthracene	mg/kg	NA	8.93E+01	3.30E-01	ND					1.30E-01	J				1.00E-01	J			
Benzo(a)pyrene	mg/kg	NA	8.93E+00	3.30E-01	7.90E-02	J				4.10E-01	J			YES	1.60E-01	J			
Benzo(b)fluoranthene	mg/kg	NA	8.93E+01	6.55E-01	8.10E-02	J				6.00E-01					1.50E-01	J			
Benzo(ghi)perylene	mg/kg	NA	2.79E+04	6.55E-01	1.40E-01	J				1.40E-01	J				1.30E-01	J			
Benzo(k)fluoranthene	mg/kg	NA	8.93E+02	6.55E-01	7.40E-02	J				7.00E-01				YES	1.50E-01	J			
Chrysene	mg/kg	NA	9.79E+03	3.30E-01	ND					2.30E-01	J				1.20E-01	J			
Di-n-butyl phthalate	mg/kg	NA	1.14E+05	1.11E-01	ND					ND					ND				
Dibenz(a,h)anthracene	mg/kg	NA	9.79E+00	3.30E-01	ND					ND					6.60E-02	J			
Fluoranthene	mg/kg	NA	3.73E+04	3.30E-01	ND					2.00E-01	J				1.60E-01	J			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.93E+01	6.55E-01	9.80E-02	J				1.50E-01	J				1.20E-01	J			
Phenanthrene	mg/kg	NA	2.79E+05	3.30E-01	ND					ND					5.80E-02	J			
Pyrene	mg/kg	NA	3.06E+04	3.30E-01	ND					3.50E-01	J			YES	1.80E-01	J			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	5.41E+03	1.82E-01	ND					ND					ND				
PESTICIDES																			
4,4'-DDD	mg/kg	NA	2.35E+02	3.30E-03	ND					4.70E-03				YES	ND				
4,4'-DDE	mg/kg	NA	1.66E+02	3.30E-03	ND					7.40E-03				YES	4.00E-03	J			YES
Endrin	mg/kg	NA	2.79E+02	3.30E-03	ND					ND					1.70E-03	J			

Table 2-5

Sediment Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-SW/SD04					FTA-93-SW/SD05					FTA-93-SW/SD06				
Sample Number					DA1004					DA1005					DA1008				
Sample Date					23-Oct-98					22-Oct-98					22-Oct-98				
Sample Depth (Feet)					0- 0.5					0- 0.5					0- 0.5				
Parameter	Units	BKG[a]	SSSL[b]	ESV[b]	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV	Result	Qual	>BKG	>SSSL	>ESV
METALS																			
Aluminum	mg/kg	8.59E+03	1.15E+06	NA	9.68E+03		YES			8.63E+03		YES			5.41E+03				
Arsenic	mg/kg	1.13E+01	5.58E+01	7.24E+00	8.05E+01		YES	YES	YES	1.01E+01				YES	5.10E+00				
Barium	mg/kg	9.89E+01	8.36E+04	NA	6.27E+01					1.52E+02		YES			2.60E+01				
Beryllium	mg/kg	9.70E-01	1.50E+02	NA	ND					ND					7.10E-01				
Cadmium	mg/kg	4.30E-01	1.71E+02	1.00E+00	1.60E+00		YES		YES	ND					ND				
Calcium	mg/kg	1.11E+03	NA	NA	3.08E+03	J	YES			3.42E+03	J	YES			3.35E+03	J	YES		
Chromium	mg/kg	3.12E+01	2.79E+03	5.23E+01	2.84E+01	J				2.73E+01	J				1.93E+01	J			
Cobalt	mg/kg	1.10E+01	6.72E+04	5.00E+01	ND					ND					7.10E+00				
Copper	mg/kg	1.71E+01	4.74E+04	1.87E+01	2.65E+01		YES		YES	2.11E+01		YES		YES	1.24E+01				
Iron	mg/kg	3.53E+04	3.59E+05	NA	2.34E+04					3.69E+04		YES			2.25E+04				
Lead	mg/kg	3.78E+01	4.00E+02	3.02E+01	2.44E+01					6.43E+01		YES		YES	1.05E+01				
Magnesium	mg/kg	9.06E+02	NA	NA	ND					ND					2.11E+03	J	YES		
Manganese	mg/kg	7.12E+02	4.38E+04	NA	9.88E+01	J				3.47E+03	J	YES			2.36E+02	J			
Mercury	mg/kg	1.10E-01	2.99E+02	1.30E-01	ND					1.00E-01					ND				
Nickel	mg/kg	1.30E+01	1.76E+04	1.59E+01	1.18E+01					ND					1.09E+01				
Potassium	mg/kg	1.01E+03	NA	NA	ND					ND					ND				
Selenium	mg/kg	7.20E-01	5.96E+03	NA	3.30E+00		YES			ND					ND				
Sodium	mg/kg	6.92E+02	NA	NA	ND					ND					ND				
Vanadium	mg/kg	4.09E+01	4.83E+03	NA	2.29E+01					ND					7.40E+00				
Zinc	mg/kg	5.27E+01	3.44E+05	1.24E+02	1.24E+02		YES		YES	1.09E+02		YES			4.90E+01				
VOLATILE ORGANIC COMPOUNDS																			
2-Butanone	mg/kg	NA	6.23E+05	1.37E-01	2.80E-02	J				2.10E-02	J				ND				
Acetone	mg/kg	NA	1.03E+05	4.53E-01	4.50E-01	J				3.00E-01	J				3.90E-02	B			
Carbon disulfide	mg/kg	NA	1.04E+05	1.34E-01	1.70E-02	J				7.60E-03	J				ND				
Chloroethane	mg/kg	NA	2.54E+04	5.86E+01	ND					ND					ND				
Methylene chloride	mg/kg	NA	9.84E+03	1.26E+00	1.90E-02	B				5.00E-02	J				1.10E-02	B			
Toluene	mg/kg	NA	2.11E+05	6.70E-01	3.60E-02					ND					ND				
Trichloroethene	mg/kg	NA	6.61E+03	1.80E-01	5.70E-03	J				ND					ND				
Trichlorofluoromethane	mg/kg	NA	3.06E+05	3.07E-03	ND					ND					ND				
p-Cymene	mg/kg	NA	2.08E+05	NA	1.60E-02	J				ND					ND				

Table 2-5

Sediment Analytical Results
Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7)
Fort McClellan, Calhoun County, Alabama

Sample Location					FTA-93-SW/SD04					FTA-93-SW/SD05					FTA-93-SW/SD06				
Sample Number					DA1004					DA1005					DA1008				
Sample Date					23-Oct-98					22-Oct-98					22-Oct-98				
Sample Depth (Feet)					0- 0.5					0- 0.5					0- 0.5				
Parameter	**Units**	**BKG[a]**	**SSSL[b]**	**ESV[b]**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**	**Result**	**Qual**	**>BKG**	**>SSSL**	**>ESV**
SEMIVOLATILE ORGANIC COMPOUNDS																			
Acenaphthylene	mg/kg	NA	5.59E+04	3.30E-01	ND					ND					ND				
Anthracene	mg/kg	NA	2.99E+05	3.30E-01	ND					ND					ND				
Benzo(a)anthracene	mg/kg	NA	8.93E+01	3.30E-01	ND					ND					4.40E-02	J			
Benzo(a)pyrene	mg/kg	NA	8.93E+00	3.30E-01	ND					ND					5.30E-02	J			
Benzo(b)fluoranthene	mg/kg	NA	8.93E+01	6.55E-01	ND					1.00E-01	J				5.00E-02	J			
Benzo(ghi)perylene	mg/kg	NA	2.79E+04	6.55E-01	ND					ND					ND				
Benzo(k)fluoranthene	mg/kg	NA	8.93E+02	6.55E-01	ND					ND					5.30E-02	J			
Chrysene	mg/kg	NA	9.79E+03	3.30E-01	ND					ND					5.10E-02	J			
Di-n-butyl phthalate	mg/kg	NA	1.14E+05	1.11E-01	5.30E-01	B			YES	ND					ND				
Dibenz(a,h)anthracene	mg/kg	NA	9.79E+00	3.30E-01	ND					ND					ND				
Fluoranthene	mg/kg	NA	3.73E+04	3.30E-01	ND					1.20E-01	J				7.90E-02	J			
Indeno(1,2,3-cd)pyrene	mg/kg	NA	8.93E+01	6.55E-01	ND					ND					ND				
Phenanthrene	mg/kg	NA	2.79E+05	3.30E-01	ND					ND					ND				
Pyrene	mg/kg	NA	3.06E+04	3.30E-01	ND					ND					5.70E-02	J			
bis(2-Ethylhexyl)phthalate	mg/kg	NA	5.41E+03	1.82E-01	ND					1.90E-01	J			YES	1.10E-01	J			
PESTICIDES																			
4,4'-DDD	mg/kg	NA	2.35E+02	3.30E-03	4.80E-03				YES	ND					ND				
4,4'-DDE	mg/kg	NA	1.66E+02	3.30E-03	1.10E-02				YES	5.60E-03				YES	ND				
Endrin	mg/kg	NA	2.79E+02	3.30E-03	ND					ND					ND				

Analyses performed using U.S. Environmental Protection Agency (EPA) SW-846 analytical methods.

[a] Bkg - Background. Concentration listed is two times (2x) the arithmetic mean of background metals concentration given in Science Applications International Corporation (1998), *Final Background Metals Survey Report, Fort McClellan, Alabama,* July.

[b] Recreational site user site-specific screening level (SSSL) and ecological screening value (ESV) as given in IT Corporation (2000), *Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama,* July.

B - Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero).

J - Compound was positively indentified; reported value is the estimated concentration.

mg/kg - Milligrams per kilogram

NA - Not available

ND - Not detected

Qual - Data validation qualifier

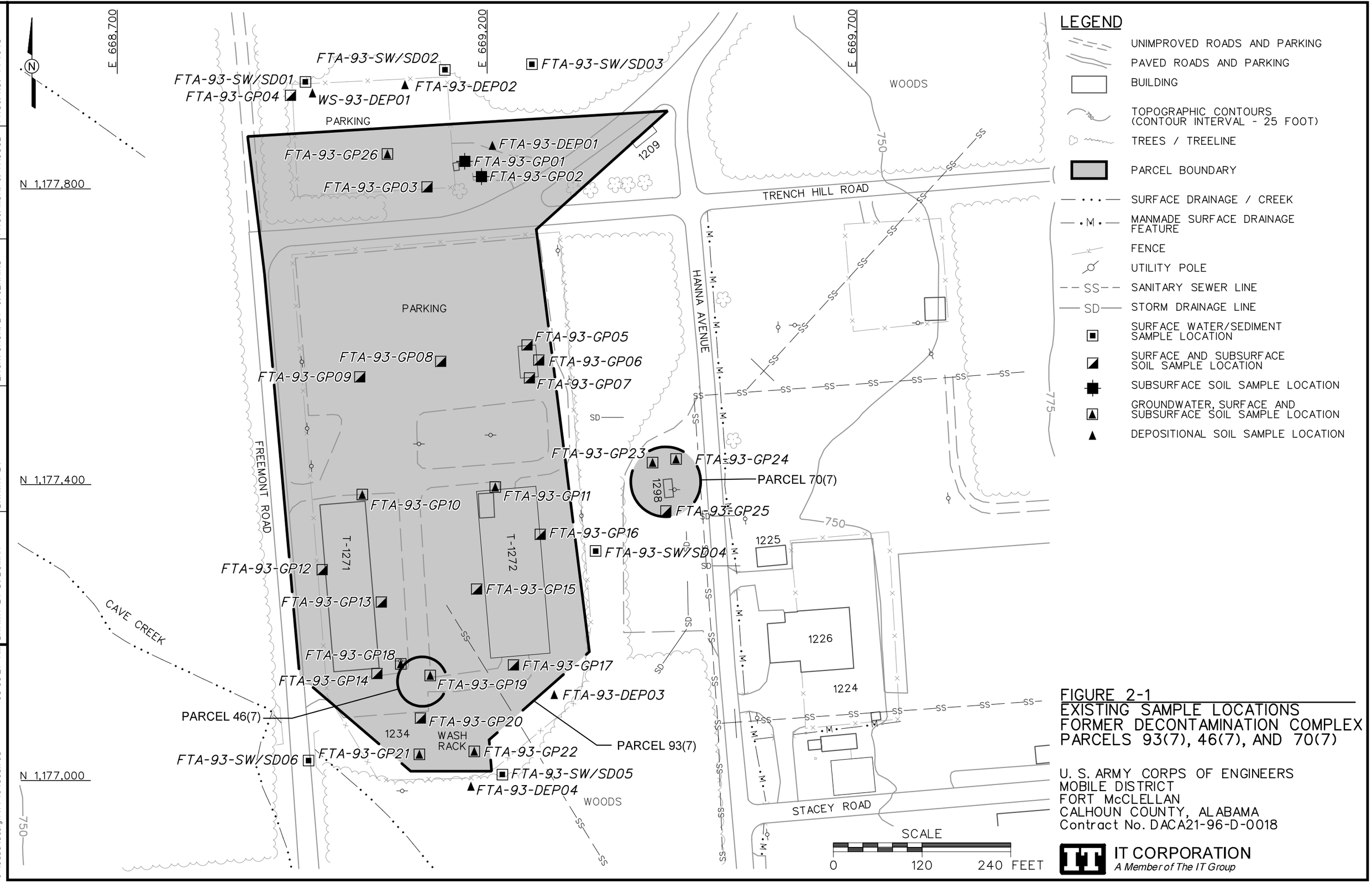

FIGURE 2-1
EXISTING SAMPLE LOCATIONS
FORMER DECONTAMINATION COMPLEX
PARCELS 93(7), 46(7), AND 70(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

IT CORPORATION
A Member of The IT Group

DBILLING
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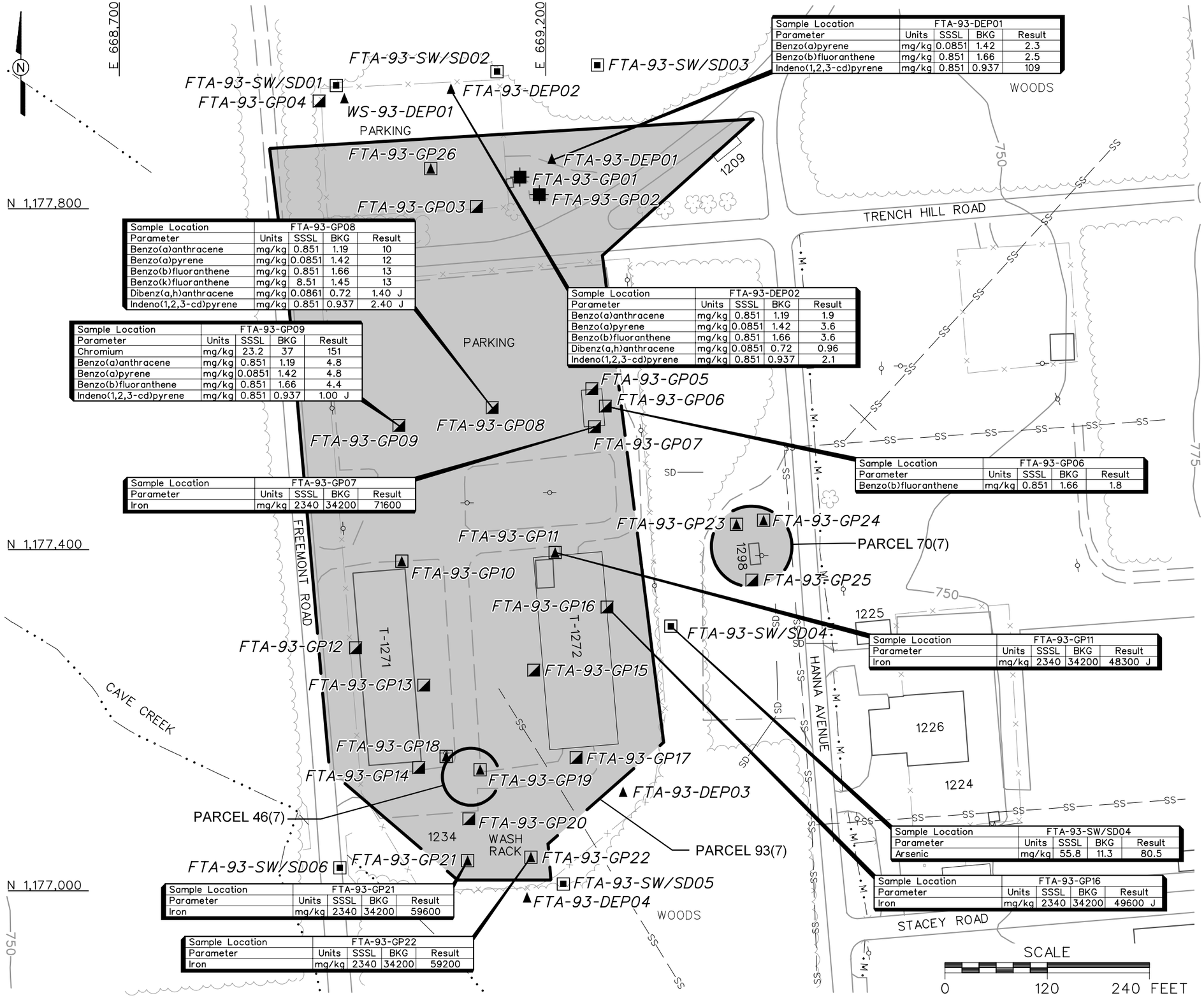
09/24/01 08:55:27 AM
STARTING DATE: 06/12/01
DRAWN BY: D. BOMAR
DRAWN BY:
DATE LAST REV.:
DRAFT. CHCK. BY:
ENGR. CHCK. BY: J. JENKINS
PROJ. MGR.: J. YACOUB
INITIATOR: N. BADON
PROJ. NO.: 774645
DWG. NO.: ...\774645es.768



Sample Location	FTA-93-DEP01			
Parameter	Units	SSSL	BKG	Result
Benzo(a)pyrene	mg/kg	0.0851	1.42	2.3
Benzo(b)fluoranthene	mg/kg	0.851	1.66	2.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.851	0.937	109

Sample Location	FTA-93-GP08			
Parameter	Units	SSSL	BKG	Result
Benzo(a)anthracene	mg/kg	0.851	1.19	10
Benzo(a)pyrene	mg/kg	0.0851	1.42	12
Benzo(b)fluoranthene	mg/kg	0.851	1.66	13
Benzo(k)fluoranthene	mg/kg	8.51	1.45	13
Dibenz(a,h)anthracene	mg/kg	0.0861	0.72	1.40 J
Indeno(1,2,3-cd)pyrene	mg/kg	0.851	0.937	2.40 J

Sample Location	FTA-93-DEP02			
Parameter	Units	SSSL	BKG	Result
Benzo(a)anthracene	mg/kg	0.851	1.19	1.9
Benzo(a)pyrene	mg/kg	0.0851	1.42	3.6
Benzo(b)fluoranthene	mg/kg	0.851	1.66	3.6
Dibenz(a,h)anthracene	mg/kg	0.0851	0.72	0.96
Indeno(1,2,3-cd)pyrene	mg/kg	0.851	0.937	2.1

Sample Location	FTA-93-GP09			
Parameter	Units	SSSL	BKG	Result
Chromium	mg/kg	23.2	37	151
Benzo(a)anthracene	mg/kg	0.851	1.19	4.8
Benzo(a)pyrene	mg/kg	0.0851	1.42	4.8
Benzo(b)fluoranthene	mg/kg	0.851	1.66	4.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.851	0.937	1.00 J

Sample Location	FTA-93-GP06			
Parameter	Units	SSSL	BKG	Result
Benzo(b)fluoranthene	mg/kg	0.851	1.66	1.8

Sample Location	FTA-93-GP07			
Parameter	Units	SSSL	BKG	Result
Iron	mg/kg	2340	34200	71600

Sample Location	FTA-93-GP11			
Parameter	Units	SSSL	BKG	Result
Iron	mg/kg	2340	34200	48300 J

Sample Location	FTA-93-SW/SD04			
Parameter	Units	SSSL	BKG	Result
Arsenic	mg/kg	55.8	11.3	80.5

Sample Location	FTA-93-GP16			
Parameter	Units	SSSL	BKG	Result
Iron	mg/kg	2340	34200	49600 J

Sample Location	FTA-93-GP21			
Parameter	Units	SSSL	BKG	Result
Iron	mg/kg	2340	34200	59600

Sample Location	FTA-93-GP22			
Parameter	Units	SSSL	BKG	Result
Iron	mg/kg	2340	34200	59200

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- SURFACE DRAINAGE / CREEK
- MANMADE SURFACE DRAINAGE FEATURE
- FENCE
- UTILITY POLE
- SANITARY SEWER LINE
- STORM DRAINAGE LINE
- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL SAMPLE LOCATION
- GROUNDWATER, SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- DEPOSITIONAL SOIL SAMPLE LOCATION
- J — RESULT IS GREATER THAN THE STATED METHOD DETECTION LIMIT BUT LESS THAN OR EQUAL TO SPECIFIED REPORTING LIMIT
- mg/kg — MILLIGRAMS PER KILOGRAM
- SSSLs — SITE SPECIFIC SCREENING LEVELS
- BKG — BACKGROUND VALUE (SAIC, 1998)

FIGURE 2-2
SOIL SAMPLE LOCATIONS METALS AND PAH CONCENTRATIONS EXCEEDING RESIDENTIAL HUMAN HEALTH SSSLs AND BACKGROUND CONCENTRATIONS FORMER DECONTAMINATION COMPLEX PARCELS 93(7), 46(7), AND 70(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

IT CORPORATION
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ENGR. CHCK. BY: J. JENKINS
INITIATOR: N. BADON
PROJ. MGR.: J. YACOUB
PROJ. NO.: 774645
DWG. NO.: ...\774645es.799
REV.:
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Volatile Organic Compounds. Seventeen volatile organic compounds (VOC) were detected in surface and depositional soil samples collected at the site. The VOC concentrations in surface and depositional soils were below SSSLs. Acetone (FTA-93-GP09 and FTA-93-GP12) and xylenes (FTA-93-GP26) concentrations exceeded ESVs.

Semivolatile Organic Compounds. Twenty-three semivolatile organic compounds (SVOC), including fifteen PAH compounds, were detected in surface and depositional soil samples collected at the site. One or more of six PAH compounds, (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene) were detected at concentrations exceeding SSSLs and PAH background values at five sample locations. Figure 2-2 shows the sample locations with PAH concentrations greater than the SSSLs and PAH background values. The concentrations of the non-PAH compounds (4-methylphenol, butylbenzyl phthalate, carbazole, di-n-butyl phthalate, dibenzofuran, diethyl phthalate, phenol, and bis[2-ethyl hexyl]phthalate) were below SSSLs.

The following PAH compounds were detected at concentrations exceeding ESVs and PAH background values: anthracene (five locations), benzo(a)pyrene (four locations), benzo(a)anthracene (one location), chrysene (two locations), fluoranthene (three locations), phenanthrene (two locations), and pyrene (five locations). In addition, phenol concentrations exceeded the ESV at two sample locations.

Pesticides. Four pesticides (4,4'-dichlorodiphenyldichloroethane [DDD], 4,4'-dichlorodiphenyldichloroethene [DDE], 4,4'-dichlorodiphenyltrichloroethane [DDT], and endrin ketone) were detected in a total of six surface and depositional soil samples collected at the site. The pesticide concentrations in surface and depositional soils were below SSSLs.

The concentrations of 4,4'-DDD (five locations), 4,4'-DDE (four locations), 4,4'-DDT (three locations), and endrin ketone (one location) exceeded ESVs.

Polychlorinated Biphenyls. Polychlorinated biphenyls (PCB) Aroclor 1254 was detected in one surface soil sample (FTA-93-GP24) at a concentration (0.11 milligrams per kilogram [mg/kg]) below its SSSL but exceeding the ESV (0.02 mg/kg).

2.3 Subsurface Soil Analytical Results

Twenty-six subsurface soil samples were collected for chemical analysis at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7). Subsurface soil samples were collected at depths greater than 1 foot bgs at the locations shown on Figure 2-1. Analytical

results were compared to residential human health SSSLs and background screening values, as shown in Table 2-2.

Metals. Nineteen metals were detected in subsurface soil samples collected at the site. Aluminum (seven locations) and iron (three locations) concentrations exceeded residential human health SSSLs and background concentrations in subsurface soil. However, the aluminum results were within the range of background aluminum values determined by SAIC (1998). The iron results exceeded the range of background iron values in three samples (FTA-93-GP07, FTA-93-GP11, and FTA-93-GP16). These sample locations are shown on Figure 2-2.

Volatile Organic Compounds. Seven VOCs, including 2-butanone, acetone, bromomethane, carbon disulfide, methylene chloride, naphthalene, and p-cymene, were detected in subsurface soil samples collected at the site. The VOC concentrations in subsurface soils were below SSSLs.

Semivolatile Organic Compounds. Six SVOCs, including four PAH compounds, were detected in subsurface soil samples collected at the site. The SVOC concentrations in subsurface soils were below SSSLs.

Pesticides. Six pesticides, including 4,4'-DDE, 4,4'-DDT, aldrin, heptachlor, beta-betahexachlorocyclohexane (BHC), and delta-BHC, were detected in the subsurface soil sample collected at FTA-93-GP01. Pesticides were not detected in any of the other subsurface soil samples. The pesticide concentrations in subsurface soils were below SSSLs.

2.4 Groundwater Analytical Results

Nine temporary monitoring wells were sampled at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), at the locations shown on Figure 2-1. Analytical results were compared to residential human health SSSLs and metals background concentrations, as shown in Table 2-3.

Metals. Twenty metals were detected in groundwater samples collected at the site. The concentrations of 14 metals (aluminum, arsenic, barium, beryllium, chromium, copper, iron, lead, manganese, nickel, selenium, thallium, vanadium, and zinc) exceeded SSSLs. Of these 14 metals, 11 metals also exceeded their respective background concentrations at one or more sampling locations: aluminum (six locations), arsenic (FTA-93-GP23), barium (FTA-93-GP23 and FTA-93-GP26), beryllium (FTA-93-GP23), copper (FTA-93-GP23 and FTA-93-GP26), iron (four locations), lead (FTA-93-GP23 and FTA-93-GP26), manganese (seven locations), thallium

(FTA-93-GP23), vanadium (FTA-93-GP23 and FTA-93-GP26), and zinc (FTA-93-GP23). Background concentrations for chromium, nickel, and selenium were not available in the background metals survey (SAIC, 1998).

The majority of the metals that exceeded SSSLs and background concentrations were present in three groundwater samples (FTA-93-GP18, FTA-93-GP23, and FTA-93-GP26) that had high turbidity at the time of sample collection (>1,000 nephelometric turbidity units [NTU]). To evaluate the effects of turbidity on metals concentrations in groundwater at FTMC, IT resampled five wells that previously had high turbidity using a "low-flow" groundwater purging and sampling technique to reduce turbidity to below 10 NTU. The resampling effort demonstrated that the concentrations of most metals in the lower turbidity samples were significantly lower (1 to 2 orders of magnitude) than in the higher turbidity samples (IT, 2000c). Consequently, the elevated metals results in the groundwater samples collected at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), are likely the result of high turbidity.

Excluding the three high-turbidity samples, the concentrations of aluminum (at three locations), iron (three locations), and manganese (five locations) exceeded SSSLs and their respective background concentrations. With the exception of iron in one sample, these metals concentrations were within the range of background values determined by SAIC (1998).

Volatile Organic Compounds. Twenty-one VOCs were detected in groundwater samples collected at the site. The concentrations of 1,1,2,2-tetrachloroethane (0.0022 milligrams per liter [mg/L]) at one location (FTA-93-GP10), and vinyl chloride (0.00028 mg/L and 0.00034 mg/L) at two locations (FTA-93-GP10 and FTA-93-GP22) exceeded SSSLs. The sample locations with VOCs exceeding SSSLs are shown on Figure 2-3.

Semivolatile Organic Compounds. Six SVOCs (2,6-dinitrotoluene, 4-methylphenol, di-n-butyl phthalate, diethyl phthalate, phenol, and bis[2-ethylhexyl]phthalate) were detected in groundwater samples collected at the site. The 2,6-dinitrotoluene concentration (0.0048 mg/L) exceeded the SSSL (0.00009 mg/L) at one location (FTA-93-GP18), as shown on Figure 2-3.

Herbicides. The herbicide 2,2-dichloropropanoic acid was detected in two groundwater samples (FTA-93-GP10 and FTA-93-GP11) at concentrations below the SSSL.

2.5 Surface Water Analytical Results

Six surface water samples were collected for chemical analysis at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), at the locations shown on Figure 2-1.

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PROJ. NO.: 774645
INITIATOR: N. BADON
PROJ. MGR.: J. YACOUB
DRAFT. CHCK. BY:
ENGR. CHCK. BY: J. JENKINS
DATE LAST REV.:
DRAWN BY:
STARTING DATE: 06/12/01
DRAWN BY: D. BOMAR
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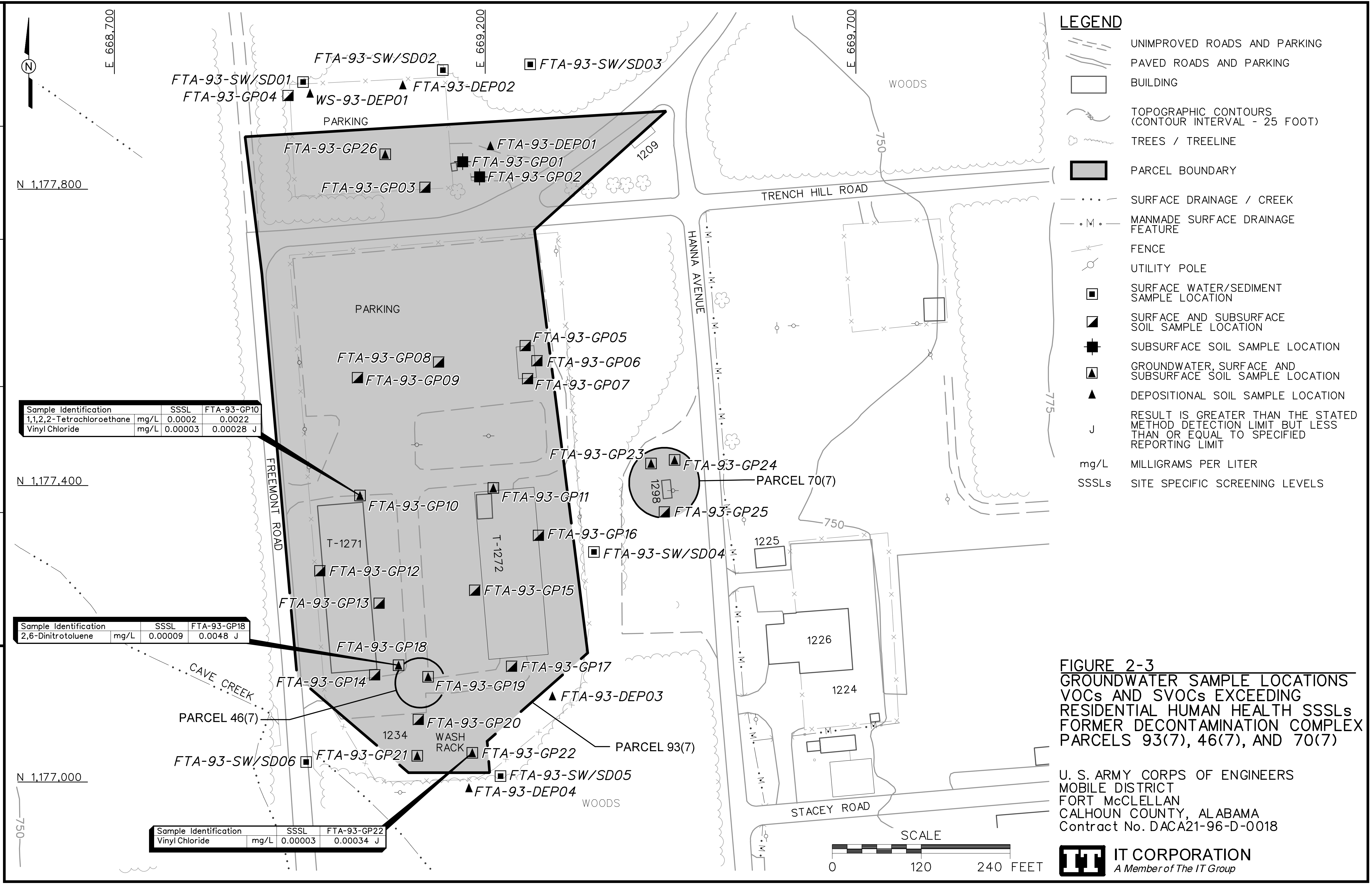

Sample Identification		SSSL	FTA-93-GP10
1,1,2,2-Tetrachloroethane	mg/L	0.0002	0.0022
Vinyl Chloride	mg/L	0.00003	0.00028 J

Sample Identification		SSSL	FTA-93-GP18
2,6-Dinitrotoluene	mg/L	0.00009	0.0048 J

Sample Identification		SSSL	FTA-93-GP22
Vinyl Chloride	mg/L	0.00003	0.00034 J

FIGURE 2-3
GROUNDWATER SAMPLE LOCATIONS
VOCs AND SVOCs EXCEEDING
RESIDENTIAL HUMAN HEALTH SSSLs
FORMER DECONTAMINATION COMPLEX
PARCELS 93(7), 46(7), AND 70(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

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Analytical results were compared to recreational site user human health SSSLs, ESVs, and background screening values, as shown in Table 2-4.

Metals. Twelve metals were detected in surface water samples collected at the site. The concentrations of arsenic (at one location), manganese (two locations), and thallium (two locations) exceeded SSSLs and their respective background concentrations but were within the range of background values determined by SAIC (1998).

The concentrations of six metals (aluminum, barium, iron, manganese, mercury, and thallium) exceeded ESVs. Of these metals, only manganese and thallium in two samples each also exceeded their respective background concentrations (note: a background value for mercury was not available). The manganese and thallium results were within the range of background values except for one "B" – flagged thallium result (0.0045 mg/L), which marginally exceeded the background range (0.0042 mg/L).

Volatile Organic Compounds. Eleven VOCs were detected in surface water samples collected at the site. The VOC concentrations in surface water were below SSSLs and ESVs.

Semivolatile Organic Compounds. Phenol and bis(2-ethylhexyl)phthalate were detected in surface water samples collected at the site. The concentrations of these SVOCs were below SSSLs. The bis(2-ethylhexyl)phthalate concentration (0.042 mg/L) at sample location FTA-93-SW/SD06 exceeded the ESV (0.0003 mg/L).

Herbicides. The herbicide 2,2-dichloropropanoic acid was detected in one surface water sample (FTA-93-SW/SD02) at a concentration below the SSSL. An ESV for 2,2 dichloropropanoic acid was not available.

2.6 Sediment Analytical Results

Six sediment samples were collected for chemical and physical analyses at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7). Sediment samples were collected from the upper 0.5 foot of sediment at the locations shown on Figure 2-1. Analytical results were compared to recreational site user human health SSSLs, ESVs, and background screening values, as shown in Table 2-5.

Metals. Twenty metals were detected in sediment samples collected at the site. The concentration of arsenic (80.5 mg/kg) exceeded the SSSL (55.8 mg/kg) and the background concentration (11.3 mg/kg) at one sample location (FTA-93-SW/SD04). The arsenic result also

exceeded the range of background values determined by SAIC (1998). The sample location is shown on Figure 2-2.

The concentrations of arsenic (at two locations), cadmium (one location), copper (three locations), lead (three locations), and zinc (one location) exceeded ESVs and their respective background concentrations. With the exception of arsenic and zinc at one location (FTA-93-SW/SD04), the concentrations of these metals were within the range of background values determined by SAIC (1998).

Volatile Organic Compounds. Nine VOCs were detected in sediment samples collected at the site. With the exception of trichlorofluoromethane in one sample, the VOC concentrations in sediments were below SSSLs and ESVs. The trichlorofluoromethane concentration (0.004 mg/kg) was below its SSSL but exceeded its ESV (0.0031 mg/kg) in sample FTA-93-SW/SD01.

Semivolatile Organic Compounds. Fifteen SVOCs, including 13 PAH compounds, were detected in sediment samples collected at the site. The SVOC concentrations in sediments were below SSSLs.

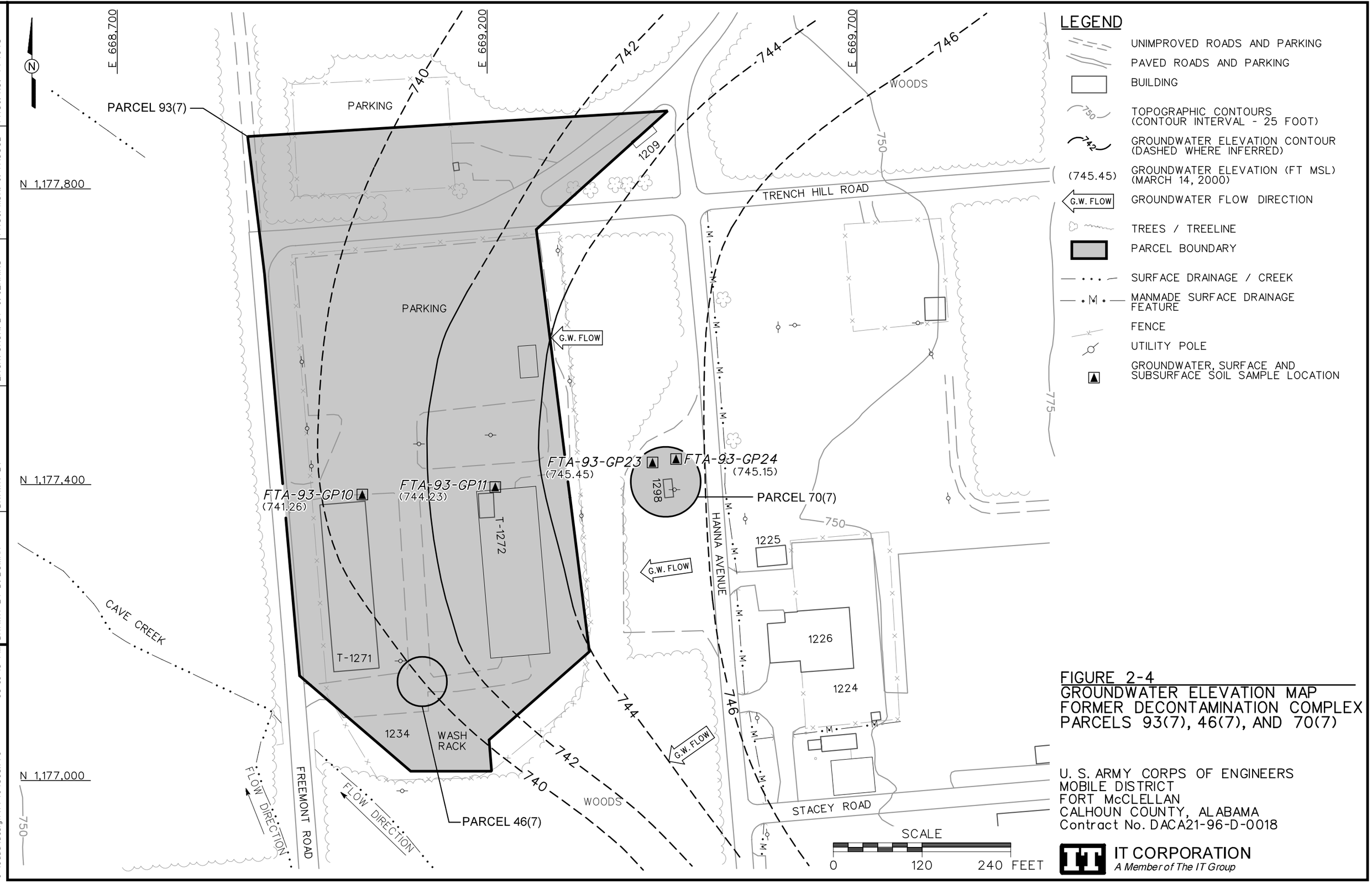
The concentrations of acenaphthylene (at FTA-93-SW/SD02), benzo(a)pyrene (FTA-93-SW/SD02), benzo(k)fluoranthene (FTA-93-SW/SD02), pyrene (FTA-93-SW/SD03), di-n-butyl phthalate (FTA-93-SW/SD04), and bis(2-ethylhexyl)phthalate (FTA-93-SW/SD05) exceeded ESVs.

Pesticides. Three pesticides (4,4'-DDD, 4,4'-DDE, and endrin) were detected in sediment samples collected at the site. The pesticide concentrations in sediments were below SSSLs.

The concentrations of 4,4'-DDD (at FTA-93-SW/SD02 and FTA-93-SW/SD04) and 4,4'-DDE (four locations) exceeded ESVs.

2.7 Water Level Measurements and Groundwater Flow

On March 14, 2000, the depth to groundwater was measured in temporary monitoring wells at the Former Decontamination Complex, Parcels 93(7), 46(7), 70(7), and 140(7), following procedures outlined in Section 4.18 of the SAP (IT, 2000a). Measurements were referenced to the top of the polyvinyl chloride (PVC) well casing. A groundwater elevation map was constructed using the March 2000 data, as shown on Figure 2-4. Based on the March groundwater levels, horizontal groundwater flow is generally to the west.



LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- (745.45) GROUNDWATER ELEVATION (FT MSL) (MARCH 14, 2000)
- G.W. FLOW GROUNDWATER FLOW DIRECTION
- TREES / TREELINE
- PARCEL BOUNDARY
- SURFACE DRAINAGE / CREEK
- MANMADE SURFACE DRAINAGE FEATURE
- FENCE
- UTILITY POLE
- GROUNDWATER, SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION

FIGURE 2-4
GROUNDWATER ELEVATION MAP
FORMER DECONTAMINATION COMPLEX
PARCELS 93(7), 46(7), AND 70(7)

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CALHOUN COUNTY, ALABAMA
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2.8 Geophysical Survey Results

A geophysical survey was conducted during the SI at Parcel 140(7) to determine the presence of USTs. A former gas station was reportedly located at Parcel 140(7). Records indicate that it was a standard post gas station built in 1941. Reportedly, the station contained two 10,000-gallon USTs to store gasoline and diesel fuel. The foundation of the building is not present.

The geophysical survey results indicated the presence of one anomaly representing a potential UST at Parcel 140(7). IT investigated the anomaly using exploratory trenching and excavation and determined that no USTs were present. The anomaly was caused by reinforced concrete, old piping, and backfill debris from previous tank removal activities. The old piping was removed for disposal and an ADEM Closure Assessment Form was completed for the anomaly. As previously discussed, based on the geophysical survey and the SI analytical results, the BCT agreed that no further action is necessary at Parcel 140(7) (IT, 2001).

3.0 Site-Specific Data Quality Objectives

3.1 Overview

The data quality objectives (DQO) process is followed to establish data requirements. This process ensures that the proper quantities of data are generated to support the decision-making process associated with the action selection for the Former Decontamination Complex and associated parcels. This section incorporates the components of the DQO process described in *Data Quality Objectives Process for Superfund* (EPA, 1993). The DQO process as applied to FTMC is described in more detail in Table 3-1 of this SFSP and in Sections 3.2 and 4.3 of the WP (IT, 1998a). The purpose of this supplemental SI is to determine the vertical and horizontal extent of PSSCs in site media and to determine future actions at the parcels. A conceptual site exposure model (CSEM) has been developed for this effort. A conceptual model of the site ensures that the objectives of the supplemental SI are met and establishes a basis for future action at the site. This SFSP, along with the necessary companion documents, has been designed to provide FTMC risk managers with sufficient detail to reach a determination as to the adequacy of the scope of work. The program has also been designed to provide defensible information required to confirm or deny the existence of residual chemical contamination in site media.

The samples will be analyzed using EPA SW-846 methods, including Update III Methods where applicable, as presented in Chapter 4.0 of this SFSP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with Corps of Engineers South Atlantic Savannah (CESAS) Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). Chemical data will be reported via hard-copy data packages by the laboratory using Contract Laboratory Program-like forms. These packages will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

3.2 Data Users and Available Data

The available data related to the supplemental SI at the Former Decontamination Complex presented in Table 3-1, have been used to formulate a site-specific conceptual model. This conceptual model was developed to support the development of this SFSP, which is necessary to meet the objectives of these activities and to establish a basis for future action at the site. The data users for the data and information generated during field activities are primarily EPA, USACE, ADEM, FTMC, and the USACE supporting contractors. This SFSP, along with the necessary companion documents, has been designed to provide the regulatory agencies with sufficient detail to reach a determination as to the adequacy of the scope of work. The program has also been designed to provide the level of defensible data and information required to confirm or rule out the existence of residual chemical contamination in site media.

Table 3-1

Summary of Data Quality Objectives
Former Decontamination Complex, Parcels 93(7), 70(7) and 46(7)
Fort McClellan, Calhoun County, Alabama

Potential Data Users	Available Data	Conceptual Site Model	Media of Concern	Data Uses and Objectives	Data Types	Analytical Level	Data Quantity
EPA ADEM USACE DOD IT Corporation Other Contractors Possible future land users	Data from the IT Draft Site Investigation Report, November 2000	<u>Contaminant Source</u> Chemical laundry USTs oil/water separator <u>Migration Pathways</u> Infiltration and leaching to subsurface soil and groundwater Dust emissions and volatilization to air. Runoff and erosion to surface water and sediment. Groundwater discharge to surface water. <u>Potential Receptors</u> Recreational Site User (current & future) Groundskeeper (future) Resident (future) Construction Worker (current & future) <u>PSSC</u> Petroleum by-products Metals Chlorinated oils Toluene and ethyl alcohol Cyanide	Surface Soil Groundwater	Supplemental SI to confirm whether PSSC are present in the site media. Definitive quality data for future decision making.	<u>Surface soil</u> TAL Metals	Definitive and CESAS Level B	3 hand auger + QC
					<u>Groundwater</u> Nitroaromatic/Nitramine Explosives TCL VOCs , TAL Metals	Definitive and CESAS Level B	11 monitoring wells + QC

ADEM - Alabama Department of Environmental Management.
CESAS - Corps of Engineers South Atlantic Savannah.
DOD - U.S. Department of Defense.
EPA - U.S. Environmental Protection Agency.
PSSC - Potential site-specific chemical.
QC - Quality control.
SI - Site investigation.
TAL - Target analyte list.
TCL - Target compound list.
USACE - U.S. Army Corps of Engineers.
UST - Underground storage tank.
VOC - Volatile organic compound.

3.3 Conceptual Site Exposure Model

The CSEM provides the basis for identifying and evaluating the potential risks and hazards to human health in the risk assessment (Figure 3-1). The CSEM includes receptors and potential exposure pathways appropriate to all plausible scenarios. The CSEM facilitates a consistent and comprehensive evaluation of human health through graphical presentation of all possible exposure pathways, including sources, release and transport pathways, and exposure routes. In addition, the CSEM helps to ensure that potential pathways are not overlooked. The elements of a complete exposure pathway and CSEM are:

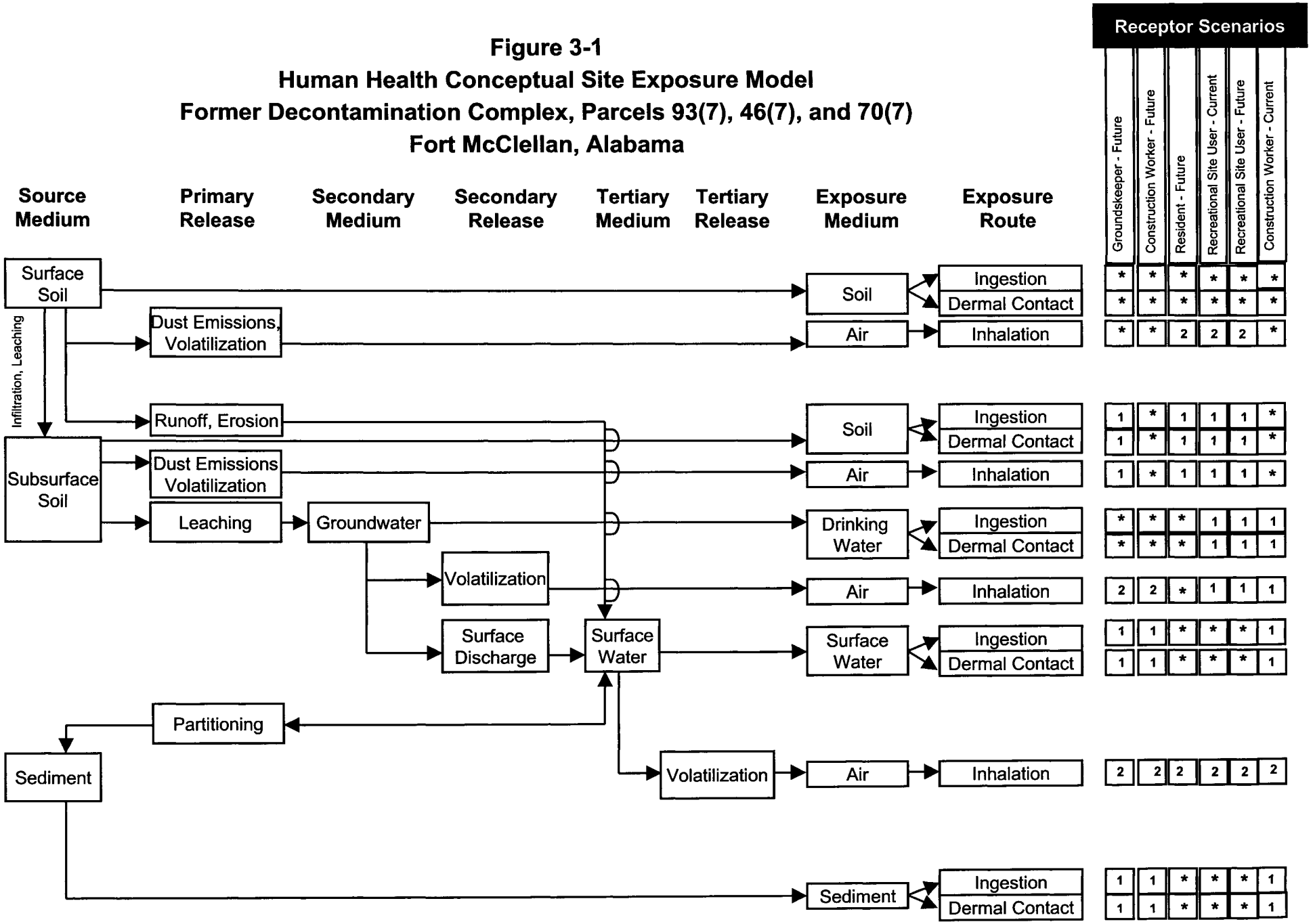
- Source (i.e., contaminated environmental) media
- Contaminant release mechanisms
- Contaminant transport pathways
- Receptors
- Exposure pathways.

Contaminant release mechanisms and transport pathways are not relevant for direct receptor contact with a contaminated source medium.

Potential contaminants at this site include a wide variety of chemicals and petroleum products arising from the diverse activities formerly performed at various locations on the site. Primary contaminant releases were most likely associated with leaks and spills on pavement or surface soil. Potential contaminant transport pathways include infiltration and leaching to subsurface soil and groundwater, dust emissions, and volatilization to ambient air. Runoff and erosion to surface water and sediment from surface soil are also possible.

Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7) are located in the northwest portion of the Main Post on the corner of Trench Hill Road and Freemont Road. The Former Decontamination Complex, built in 1941, is a four-acre fenced area with one standing building (Building 1271). The remainder of the site consists of paved or gravel areas, building foundations, or wetland areas. Currently, the Alabama Army National Guard uses the site for storing large equipment (e.g., bleachers) and vehicles. Therefore, the Fort McClellan receptor scenario most similar to the site's current use is the recreational site user. The recreational site user is the receptor scenario least exposed to the site. Because the site is fenced and partially paved, it is not anticipated that hunting would occur. Some construction work is also occurring at the site, so the construction worker receptor scenario is also included under current land-use. Other potential receptor scenarios considered, but not included under current land-use scenarios, are the:

Figure 3-1
Human Health Conceptual Site Exposure Model
Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7)
Fort McClellan, Alabama



* = Complete exposure pathway evaluated in the streamlined risk assessment.
1 = Incomplete exposure pathway.
2 = Although theoretically complete, this pathway is judged to be insignificant and is not evaluated in the streamlined risk assessment.

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- ***Groundskeeper***. The site is not currently maintained by a groundskeeper, nor are there any workers at the site on a regular, daily basis.

- ***Resident***. The site is not currently used for residential purposes.

Future land use at the Former Decontamination Complex will be storage. Potential receptor scenarios evaluated for the future include the following:

- ***Resident***. Although the site is not expected to be used for residential purposes, the resident is considered in order to provide information for the project manager and regulators.

- ***Groundskeeper***. The site is likely to have areas that will need to be maintained.

- ***Construction Worker***. The site may have utilities, pavement, or buildings that require maintenance or the site may undergo future development.

- ***Recreational Site User***. Currently the Alabama Army National Guard uses the site for storage; therefore, this receptor scenario most closely fits the current and anticipated future land-use.

A summary of relevant contaminant release and transport mechanisms, source and exposure media, and receptor scenarios and exposure pathways for this site is provided in Table 3-1 and Figure 3-1.

3.4 Decision-Making Process, Data Uses, and Needs

The decision-making process that will be followed during the supplemental SI at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7) is a seven-step process that is presented in detail in Sections 3.2 and 4.3 of the WP. Data uses and needs are summarized in Table 3-1.

3.4.1 Risk Evaluation

Confirmation of the presence or absence of contamination at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7), will be based on a comparison of detected site contaminants to SSSLs developed in the WP. EPA definitive data with CESAS Level B data packages will be used to achieve detection limits sufficient to determine whether or not the established guidance criteria limits are exceeded in site media. Definitive data will be adequate for confirming the presence or absence of site contamination and for supporting a feasibility study and risk assessment.

3.4.2 Data Types and Quality

Surface soil and groundwater will be sampled and analyzed in order to meet the objectives of the supplemental SI at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7). Quality assurance/quality control (QA/QC) samples will be collected for all sample types. Samples will be analyzed by EPA-approved SW-846 methods, where available; comply with EPA definitive data requirements; and be reported using hard-copy data packages along with electronic copies. In addition to meeting the quality needs of this supplemental SI, data analyzed at this level of quality are appropriate for all phases of site characterization, remedial investigation, and risk assessment.

3.4.3 Precision, Accuracy, and Completeness

Laboratory requirements of precision, accuracy, and completeness for this supplemental SI are provided in Section 9.0 of the QAP.

4.0 Field Activities

4.1 Environmental Sampling

The environmental sampling program during the supplemental SI at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7), includes the collection of three surface soil samples and the installation and sampling of eight permanent residuum monitoring wells and three bedrock monitoring wells. Groundwater analytical data will provide information related to the horizontal and vertical extent of groundwater contamination. Surface soil analytical data will be used to define the horizontal extent of surface soil contamination.

4.1.1 Surface Soil Sampling and Rationale

Three surface soil samples will be collected at the Former Decontamination Complex site, at the locations shown on Figure 4-1. Surface soil sampling rationale are presented in Table 4-1. Surface soil sample designations, depths, and QA/QC samples are listed in Table 4-2. The actual surface soil sampling locations will be determined in the field by the on-site geologist based on field conditions.

Sample Collection Procedures

Surface soil samples will be collected from the upper 1 foot of soil with a 3-inch diameter stainless-steel hand auger using the methodology specified in Section 4.9.1.1 of the SAP (IT, 2000a). Soil samples will be screened using a photoionization detector (PID) in accordance with Section 4.15 of the SAP. Sample containers, sample volumes, preservatives, and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1, of the QAP. Sample documentation and chain-of-custody records will be completed as specified in Section 4.13 of the SAP. The samples will be analyzed for the parameters listed in Table 4-2 of this SFSP.

4.1.2 Residuum Monitoring Well Installation

Eight permanent residuum monitoring wells will be installed at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7). One of the permanent residuum monitoring wells will be installed upgradient of the site, one will be installed north of the contamination found in temporary monitoring well FTA-93-GP10, three will be installed downgradient of the site, and three will be installed adjacent to existing temporary wells FTA-93-GP10, FTA-93-GP18, and FTA-93-GP22. Before the installation of the permanent monitoring wells begins, the temporary monitoring wells being replaced will be abandoned in accordance with ADEM guidelines. The permanent monitoring wells will be drilled and installed using a truck-mounted hollow-stem auger drill rig. The rationale for each monitoring well location is presented in

E 668,700

E 669,200

E 669,700

N 1,177,800

N 1,177,400

N 1,177,000

FTA-93-SW/SD02

FTA-93-SW/SD01

FTA-93-SW/SD03

FTA-93-DEP02

FTA-93-GP04

WS-93-DEP01

PARKING

FTA-93-GP26

FTA-93-DEP01

FTA-93-GP01

FTA-93-GP02

FTA-93-GP03

1209

WOODS

750

TRENCH HILL ROAD

FREEMONT ROAD

PARKING

HANNA AVENUE

FTA-93-GP27

FTA-93-GP05

FTA-93-GP08

FTA-93-GP06

FTA-93-GP28

FTA-93-GP09

FTA-93-GP07

FTA-93-MW11

FTA-93-GP29

775

FTA-93-GP23

FTA-93-GP24

1298

PARCEL 70(7)

FTA-93-MW03

FTA-93-MW02

FTA-93-GP10

FTA-93-GP11

FTA-93-MW10

FTA-93-GP25

750

FTA-93-GP16

FTA-93-MW01

FTA-93-SW/SD04

1225

T-1272

FTA-93-GP12

T-1271

FTA-93-GP15

FTA-93-GP13

CAVE CREEK

1226

FTA-93-MW05

FTA-93-GP18

FTA-93-GP17

FTA-93-GP14

FTA-93-MW04

FTA-93-GP19

FTA-93-MW09

FTA-93-DEP03

1224

FTA-93-GP20

PARCEL 46(7)

1234

WASH RACK

FTA-93-GP22

PARCEL 93(7)

FTA-93-SW/SD06

FTA-93-GP21

FTA-93-MW07

FTA-93-MW06

FTA-93-SW/SD05

FTA-93-DEP04

FTA-93-MW08

WOODS

STACEY ROAD

750

SCALE

0 120 240 FEET

LEGEND

- UNIMPROVED ROADS AND PARKING
- PAVED ROADS AND PARKING
- BUILDING
- TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 25 FOOT)
- TREES / TREELINE
- PARCEL BOUNDARY
- SURFACE DRAINAGE / CREEK
- MANMADE SURFACE DRAINAGE FEATURE
- FENCE
- UTILITY POLE
- EXISTING SURFACE WATER/SEDIMENT SAMPLE LOCATION
- EXISTING SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- EXISTING SUBSURFACE SOIL SAMPLE LOCATION
- EXISTING GROUNDWATER, SURFACE AND SUBSURFACE SOIL SAMPLE LOCATION
- EXISTING DEPOSITIONAL SOIL SAMPLE LOCATION
- PROPOSED RESIDUUM MONITORING WELL LOCATION
- PROPOSED BEDROCK MONITORING WELL LOCATION
- PROPOSED SURFACE SOIL SAMPLE LOCATION

FIGURE 4-1
PROPOSED SAMPLE LOCATIONS
FORMER DECONTAMINATION COMPLEX
PARCELS 93(7), 46(7), AND 70(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

IT CORPORATION
A Member of The IT Group

DRAFT. CHCK. BY:
ENGR. CHCK. BY: J. JENKINS
INITIATOR: N. BADON
PROJ. MGR.: J. YACOUB
DWG. NO.: ...\774645es.771
PROJ. NO.: 774645

DATE LAST REV.:
DRAWN BY:
STARTING DATE: 06/12/01
DRAWN BY: D. BOMAR
09/24/01 08:52:03 AM
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c:\cadd\design\774645es.771

Table 4-1

Sampling Locations and Rationale
Supplemental Site Investigation
Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Media	Sample Location Rationale
FTA-93-MW01	Groundwater	A permanent residuum groundwater monitoring well will be installed east of the site to collect upgradient information. The monitoring well borehole will be drilled until adequate groundwater is encountered to install a well with a 10 to 20 foot screen (anticipated depth is approximately 30 feet below ground surface). Sample data will indicate if contaminant releases into the environment have occurred from previous use of this area.
FTA-93-MW02	Groundwater	A permanent residuum groundwater monitoring well will be installed to replace temporary well FTA-93-GP10. Temporary well FTA-93-GP10 will be abandoned per ADEM guidelines. The monitoring well will be installed to approximately 14 feet below ground surface with a 10 foot screen. Groundwater samples will be collected and analyzed to confirm the presence of contaminants in the groundwater.
FTA-93-MW03	Groundwater	A bedrock groundwater monitoring well will be installed adjacent to proposed well location FTA-93-MW02. The monitoring well will be installed approximately 20 feet into competent bedrock or to approximately 75 feet below ground surface if competent bedrock is not encountered. Groundwater samples will be collected and analyzed to define the vertical extent of contaminants in the groundwater.
FTA-93-MW04	Groundwater	A permanent residuum groundwater monitoring well will be installed to replace temporary well FTA-93-GP18. The monitoring well will be installed to approximately 17 feet below ground surface with a 10 foot screen. Groundwater samples will be collected and analyzed to confirm the presence of contaminants in the groundwater.
FTA-93-MW05	Groundwater	A bedrock groundwater monitoring well will be installed adjacent to proposed well location FTA-93-MW04. The monitoring well will be installed approximately 20 feet into competent bedrock or to approximately 75 feet below ground surface if competent bedrock is not encountered. Groundwater samples will be collected and analyzed to define the vertical extent of contaminants in the groundwater.
FTA-93-MW06	Groundwater	A permanent residuum groundwater monitoring well will be installed at the location of former temporary well FTA-93-GP22. The monitoring well will be installed to approximately 15 feet below ground surface with a 10 foot screen. Groundwater samples will be collected and analyzed to confirm the presence of contaminants in the groundwater.
FTA-93-MW07	Groundwater	A bedrock groundwater monitoring well will be installed adjacent to proposed well location FTA-93-MW06. The monitoring well will be installed approximately 20 feet into competent bedrock or to approximately 75 feet below ground surface if competent bedrock is not encountered. Groundwater samples will be collected and analyzed to define the vertical extent of contaminants in the groundwater.
FTA-93-MW08	Groundwater	A permanent residuum groundwater monitoring well will be installed downgradient of FTA-93-GP22. The monitoring well borehole will be drilled until adequate groundwater is encountered to install a well with a 10 to 20 foot screen (anticipated depth is approximately 30 feet below ground surface). Groundwater samples will be collected to determine the horizontal extent of contamination at FTA-93-GP22.
FTA-93-MW09	Groundwater	A permanent residuum groundwater monitoring well will be installed downgradient of FTA-93-GP18. The monitoring well borehole will be drilled until adequate groundwater is encountered to install a well with a 10 to 20 foot screen (anticipated depth is approximately 30 feet below ground surface). Groundwater samples will be collected to determine the horizontal extent of contamination at FTA-93-GP18.
FTA-93-MW10	Groundwater	A permanent residuum groundwater monitoring well will be installed downgradient of FTA-93-GP10. The monitoring well borehole will be drilled until adequate groundwater is encountered to install a well with a 10 to 20 foot screen (anticipated depth is approximately 30 feet below ground surface). Groundwater samples will be collected to determine the horizontal extent of contamination at FTA-93-GP10.
FTA-93-MW11	Groundwater	A permanent residuum groundwater monitoring well will be installed north of FTA-93-GP10. Groundwater samples will be collected and analyzed to determine the northern extent of contamination at FTA-93-GP10. The monitoring well borehole will be drilled until adequate groundwater is encountered to install a well with a 10 to 20 foot screen (anticipated depth is approximately 30 feet below ground surface).
FTA-93-GP27	Surface Soil	Surface soil sample will be collected north of existing sample location FTA-93-GP09. Sample data will be used to determine the northern extent of chromium found in surface soil at FTA-93-GP09. Sample data will also be used to assess potential impacts to terrestrial biota that might utilize the site for food and/or habitat purposes.
FTA-93-GP28	Surface Soil	Surface soil sample will be collected down gradient of existing sample location FTA-93-GP09. Sample data will be used to determine the western extent of chromium found in surface soil at FTA-93-GP09. Sample data will also be used to assess potential impacts to terrestrial biota that might utilize the site for food and/or habitat purposes.

Table 4-1

Sampling Locations and Rationale
Supplemental Site Investigation
Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Media	Sample Location Rationale
FTA-93-GP29	Surface Soil	Surface soil sample will be collected south of existing sample location FTA-93-GP09. Sample data will be used to determine the southern extent of chromium found in surface soil at FTA-93-GP09. Sample data will also be used to assess potential impacts to terrestrial biota that might utilize the site for food and/or habitat purposes.

Table 4-2

Surface Soil Sample Designations and QA/QC Samples
Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Depth (ft. bgs)	QA/QC Samples			Analytical Suite
			Field Duplicates	Field Splits	MS/MSD	
FTA-93-GP27	FTA-93-GP27-SS-DA0067-REG	0-1			FTA-93-GP27-SS-DA0067-MS/MSD	TAL Metals
FTA-93-GP28	FTA-93-GP28-SS-DA0068-REG	0-1	FTA-93-GP28-SS-DA0069-FD			TAL Metals
FTA-93-GP29	FTA-93-GP29-SS-DA0070-REG	0-1				TAL Metals

ft. bgs - Feet below ground surface.
FD - Field duplicate.
MS/MSD - Matrix spike/matrix spike duplicate.
QA/QC - Quality assurance/quality control.
TAL - Target analyte list.

Table 4-1. The proposed permanent residuum monitoring well locations are shown on Figure 4-1. Soil samples will be collected at 5-foot intervals to the total depth of the boring during hollow-stem auger drilling. Samples will be collected using a 2-inch diameter or larger split-spoon sampler. Lithologic samples will be collected during drilling of the monitoring wells to provide a detailed lithologic log. Soil borings will be logged in accordance with American Society for Testing and Materials Method D 2488 using the Unified Soil Classification System. The soil samples will be screened in the field using a PID to identify any potential contamination that may exist in the subsurface soil. If elevated readings are observed that would indicate PSSCs, then subsurface soil samples may be collected as determined by the on-site geologist and recorded as a variance.

The monitoring well casing will consist of new 2-inch inside-diameter (ID), Schedule 40, threaded, flush-joint PVC pipe. A 10- to 20-foot length of new threaded, flush-joint, 0.010-inch continuous wrap PVC screen will be attached to the bottom of the well casing. After the casing and screen material are lowered into the boring, a sand pack consisting of Number 1 (20/40) silica sand will be tremied into place around the screen. The sand pack will extend from the bottom of the well to approximately 5 feet above the top of the screen. A 5-foot-thick bentonite seal will be placed above the sand pack. The remaining annular space will be grouted with a bentonite-cement mixture seal to ground surface.

The permanent residuum monitoring wells will be drilled, installed, and developed as specified in Section 4.8 and Appendix C of the SAP (IT, 2000a). The actual monitoring well locations will be determined in the field by the on-site geologist based on field conditions. Groundwater samples will not be collected for a period of at least 14 days after development.

4.1.3 Bedrock Monitoring Well Installation

Three permanent bedrock monitoring wells will be installed at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7), adjacent to proposed permanent residuum monitoring wells FTA-93-MW02, FTA-93-MW04, and FTA-93-MW06. The proposed bedrock monitoring well locations are shown on Figure 4-1. The permanent bedrock monitoring wells will be drilled, installed, and developed as specified in Section 4.8 and Appendix C of the SAP (IT, 2000a).

The bedrock monitoring well boreholes will be drilled using a combination of air-rotary drilling and bedrock coring techniques. A drill rig able to employ both methods will be used, if possible, to minimize mobilization costs. The bedrock monitoring wells will be drilled

approximately 20 feet into competent bedrock, or to a total depth of approximately 75 feet if competent bedrock is not encountered.

The bedrock wells will be installed prior to installation of the residuum wells. Split-spoon samples will not be collected in the bedrock boring. An air-rotary rig with a 12-inch air percussion bit or rotary bit will be used to drill the borehole from land surface to 5 feet into competent bedrock, if encountered. An 8-inch ID carbon steel International Pipe Standard (IPS) outer casing will then be installed inside the borehole from land surface to 5 feet into bedrock. The depth of the 8-inch carbon steel casing is anticipated to be approximately 25 feet below ground surface, based on the refusal depths of nearby temporary monitoring wells FTA-93-GP10 and FTA-93-GP18. A minimum of two inches of annular space between the outer casing and borehole wall will be required. The steel outer casing will be grouted in place using a tremie pipe suspended in the annulus outside of the casing. Bentonite-cement grout will be mixed, using approximately 6.5 to 7 gallons of water and 5 pounds of bentonite per 94-pound bag of Type I Portland cement. After the grout has cured a minimum of 48 hours, the borehole will be advanced an additional 15 feet, if possible, utilizing a PQ wireline core barrel, which will be used to collect core samples continuously. The hole depth into competent bedrock will be increased if groundwater is not encountered. After completion of core sample collection, a 7.875-inch air percussion bit will be used to ream the hole from the bottom of the outer casing to the total depth of the borehole. The compressor on the drill rig will be equipped with an air filter between the compressor and the drill bit. Water will be the only lubricant allowed during drilling operations.

A 4-inch monitoring well will be installed inside the outer casing at each of the proposed well locations. The well casing will consist of new 4-inch ID, Schedule 80, threaded, flush-joint PVC pipe. Attached to the bottom of the well casing will be a section of new threaded, flush-joint 0.010-inch continuous wrap PVC well screen, approximately 10 to 20 feet long. Attached to the bottom of the well will be a sump, approximately 3 to 5 feet long, composed of new 4-inch ID, Schedule 80, threaded, flush-joint PVC pipe. After the casing and screen material are lowered into the boring, a sand pack consisting of Number 1 (20/40) silica sand will be tremied into place around the screen. The sand pack will extend from the bottom of the sump to approximately 5 feet above the top of the screen and will be overlain by a 3- to 5-foot layer of extra fine (30/70) silica sand. A 5-foot-thick bentonite seal will be placed above the sand pack. The remaining annular space will be grouted with a bentonite-cement mixture seal to ground surface. The bedrock monitoring wells will be developed as specified in Section 4.8 and Appendix C of the SAP (IT, 2000a). Groundwater samples will not be collected from the bedrock wells for a period of at least 14 days after well development.

4.1.4 Groundwater Sampling and Rationale

Groundwater samples will be collected from the residuum and bedrock wells installed at the site. Groundwater sampling rationale are presented in Table 4-1. The groundwater sample designations and QA/QC samples are listed in Table 4-3. The groundwater samples will be collected in accordance with the procedures outlined in Section 4.9.1.4 of the SAP (IT, 2000a). Low-flow groundwater sampling methodology outlined in the August 2000 letter report to USACE (IT, 2000c) may be used as deemed necessary by the IT Site Manager.

4.2 Decontamination Requirements

Decontamination will be performed on sampling and nonsampling equipment to prevent cross-contamination between sampling locations. Decontamination of sampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.1 of the SAP (IT, 2000a). Decontamination of nonsampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.2 of the SAP.

4.3 Surveying of Sample Locations

Sampling locations will be marked with pin flags, stakes, and/or flagging and will be surveyed using either global positioning system (GPS) or conventional civil survey techniques, as necessary to obtain the required level of accuracy. Horizontal coordinates will be referenced to the U.S. State Plane Coordinate System, Alabama East Zone, North American Datum, 1983. Elevations will be referenced to the North American Vertical Datum of 1988.

Horizontal coordinates for surface soil locations will be recorded using a GPS to provide accuracy to within 1 meter. Because of the need to use permanent monitoring wells to determine water levels, a higher level of accuracy is required. Monitoring wells will be surveyed to an accuracy of 0.1 foot for horizontal coordinates and 0.01 foot for elevations, using survey-grade GPS techniques and/or conventional civil survey techniques as required. Procedures to be used for GPS surveying are described in Section 4.3 of the SAP. Conventional land survey requirements are presented in Section 4.19 of the SAP.

4.4 Analytical Program

Samples collected during the supplemental SI will be analyzed for various chemical parameters based on the previous SI analytical data and on EPA, ADEM, FTMC, and USACE requirements. Target analyses for samples collected at the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7) consist of the following parameters:

Table 4-3

Groundwater Sample Designations and QA/QC Samples
Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	Sample Depth (ft. bgs)	QA/QC Samples			Analytical Suite
			Field Duplicates	Field Splits	MS/MSD	
FTA-93-MW01	FTA-93-MW01-GW-DA30012-REG	a				TCL VOC, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW02	FTA-93-MW02-GW-DA30013-REG	a	FTA-93-MW02-GW-DA30014-FD			TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW03	FTA-93-MW03-GW-DA30015-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW04	FTA-93-MW04-GW-DA30016-REG	a			FTA-93-MW04-GW-DA30016-MS/MSD	TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW05	FTA-93-MW05-GW-DA30017-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW06	FTA-93-MW06-GW-DA30018-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW07	FTA-93-MW07-GW-DA30019-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW08	FTA-93-MW08-GW-DA30020-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW09	FTA-93-MW09-GW-DA30021-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW10	FTA-93-MW10-GW-DA30022-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals
FTA-93-MW11	FTA-93-MW11-GW-DA30023-REG	a				TCL VOCs, Nitroaromatic/Nitramine Explosives TAL Metals

[a] Sample depth will depend on where sufficient first water is encountered.

ft. bgs - Feet below ground surface.
FD - Field duplicate.
FS - Field split.
MS/MSD - Matrix spike/matrix spike duplicate.
QA/QC - Quality assurance/quality control.
TCL - Target compound list.
TAL - Target analyte list.
VOC - Volatile organic compound.

- Target Compound List Volatile Organic Compounds – EPA Method 8260B
- Target Analyte List Metals - EPA Method 6010B/7000
- Nitroaromatic/Nitramine explosives - EPA Method 8330.

The samples will be analyzed using EPA SW-846 methods, including Update III Methods where applicable, as presented in Table 4-4 of this SFSP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with CESAS Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). Chemical data will be reported via hard-copy data packages by the laboratory using Contract Laboratory Program-like forms and electronic copies. These packages will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

4.5 Sample Preservation, Packaging, and Shipping

Sample preservation, packaging, and shipping will follow the procedures specified in Section 4.13.2 of the SAP (IT, 2000a). Completed analysis request/COC records will be secured and included with each shipment of coolers to:

Attn: Elizabeth McIntyre
EMAX Laboratories, Inc.
1835 205th Street
Torrance, California 90501
Telephone: (424) 618-8889.

4.6 Investigative-Derived Waste Management and Disposal

Investigative-derived waste (IDW) will be managed and disposed as outlined in Appendix D of the SAP (IT, 2000a). The IDW expected to be generated from the field sampling at FTMC will consist of soils from the hollow-stem auger sampling, purge water from monitoring well development and sampling activities, decontamination fluids, spent well materials, and personal protective equipment. The IDW will be staged inside the fenced area near Buildings 335 and 336 while awaiting final disposal.

4.7 Site-Specific Safety and Health

Health and safety requirements for this supplemental SI are provided in the SSHP attachment for the Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7). The SSHP attachment will be used in conjunction with the installation-wide SHP.

Table 4-4

Analytical Samples
Supplemental Site Investigation
Former Decontamination Complex, Parcels 93(7), 46(7), and 70(7)
Fort McClellan, Calhoun County, Alabama

Parameters	Analysis Method	Sample Matrix	TAT Needed	Field Samples: No. of Sample Points	Field Samples: No. of Events	Field Samples: No. of Field Samples	QA/QC Samples[a]: Field Dups (10%)	QA/QC Samples[a]: Splits w/ QA Lab (0%)	QA/QC Samples[a]: MS/MSD (5%)	QA/QC Samples[a]: Trip Blank (1/ship)	QA/QC Samples[a]: Eq. Rinse (1/wk/matrix)	EMAX Total No. Analysis	QA Lab Total No. Analysis
Former Decontamination Complex, Parcels 93(7),46(7), and 70(7): 11 groundwater samples and 3 surface soil samples.													
Nitroaromatic/ Nitramine Explosives	8330	water		11	1	11	1		1		1	15	0
TCL VOC	8260B	water		11	1	11	1		1	3	1	18	0
TAL Metals	6010B/7000	water		11	1	11	1		1		1	15	0
TAL Metals	6010B/7000	soil		3	1	3	1		1		1	7	0
Former Decontamination Complex, Parcels 93(7),46(7), and 70(7) Subtotal:						36	4	0	4	3	4	55	0

[a]Field duplicate, QA split, and MS/MSD samples were calculated as a percentage of the field samples collected per site and were rounded to the nearest whole number.
Trip blank samples will be collected in association with water matrix samples for VOC analysis only. Assumed four field samples per day to estimate trip blanks. Equipment blanks will be collected once per event whenever sampling equipment is field decontaminated and re-used. They will be repeated weekly for sampling events that are anticipated to last more than 1 week. Assumed 20 field samples will be collected per week to estimate number of equipment blanks.

Ship samples to: EMAX Laboratories, Inc.
1835 205th Street
Torrance, California
Attn: Sample Receiving/Elizabeth McIntyre
Tel: 424-618-8889
Fax: 424-618-0818

Dups - Duplicates.
Eq. Rinse - Equipment rinse blank.
MS/MSD - Matrix spike/matrix spike duplicate.
No. - Number.
QA/QC - Quality assurance/quality control.
TAT - Turn around time.
TCL - Target compound list.
TAL - Target analyte list.
wk - Week.

5.0 Project Schedule

The project schedule for the supplemental SI activities will be provided by the IT Project Manager to the BRAC Cleanup Team on a monthly basis.

6.0 References

Environmental Science and Engineering, Inc., 1998, ***Final Environmental Baseline Survey, Fort McClellan, Alabama***, prepared for U.S. Army Environmental Center, Aberdeen Proving Ground, Maryland, January.

IT Corporation (IT), 2001, ***Draft Underground Storage Tank (UST) Removal and Closure Report, Fort McClellan, Calhoun County, Alabama***, March.

IT Corporation (IT), 2000a, ***Final Installation-Wide Sampling and Analysis Plan, Fort McClellan, Calhoun County, Alabama***, March.

IT Corporation (IT), 2000b, ***Final Human Health and Ecological Screening Values and PAH Background Summary Report, Fort McClellan, Calhoun County, Alabama***, July.

IT Corporation (IT), 2000c, Letter to Ellis Pope (USACE) from Jeanne Yacoub (IT), "Groundwater Resampling Results," August 7.

IT Corporation (IT), 1998a, ***Final Installation-Wide Work Plan, Fort McClellan, Calhoun County, Alabama***, August.

IT Corporation (IT), 1998b, ***Final Site-Specific Field Sampling and Analysis Plan Attachment, Site Investigation at the Former Decontamination Complex, Parcels 93(7), 46 (7), 140(7), and 70(7), Fort McClellan, Calhoun County, Alabama***, October.

Science Applications International Corporation (SAIC), 1998, ***Final Background Metals Survey Report, Fort McClellan, Alabama***, July.

U.S. Army Corps of Engineers (USACE), 1994, ***Requirements for the Preparation of Sampling and Analysis Plans***, Engineer Manual EM 200-1-3, September.

U.S. Environmental Protection Agency (EPA), 1993, ***Data Quality Objectives Process for Superfund, Interim Final Guidance***, EPA 540-R-93-071, September.

ATTACHMENT 1

LIST OF ABBREVIATIONS AND ACRONYMS

List of Abbreviations and Acronyms

2,4-D	2,4-dichlorophenoxyacetic acid
2,4,5-T	2,4,5-trichlorophenoxyacetic acid
2,4,5-TP	silvex
3D	3D International Environmental Group
Abs	skin absorption
Amsl	above mean sea level
AC	hydrogen cyanide
AcB2	Anniston and Allen gravelly loams, 2 to 6 percent slopes, eroded
AcC2	Anniston and Allen gravelly loams, 6 to 10 percent slopes, eroded
AcD2	Anniston and Allen gravelly loams, 10 to 15 percent slopes, eroded
AcE2	Anniston and Allen gravelly loams, 15 to 25 percent slopes, eroded
ACGIH	American Conference of Governmental Industrial Hygienists
ADEM	Alabama Department of Environmental Management
AEC	U.S. Army Environmental Center
AEL	airborne exposure limit
AHA	ammunition holding area
AL	Alabama
amb.	amber
ANAD	Anniston Army Depot
AOC	area of concern
APT	armor-piercing tracer
ARAR	applicable or relevant and appropriate requirement
AREE	area requiring environmental evaluation
ASP	Ammunition Supply Point
ASR	Archives Search Report
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
ATV	all-terrain vehicle
AWWSB	Anniston Water Works and Sewer Board
'B'	Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero)
BCF	blank correction factor
BCT	BRAC Cleanup Team
BEHP	bis(2-ethylhexyl)phthalate
BFB	bromofluorobenzene
BFE	base flood elevation
BG	Bacillus globigii
bgs	below ground surface
BHC	betahexachlorocyclohexane
bkg	background
bls	below land surface
BOD	biological oxygen demand
BRAC	Base Realignment and Closure
Braun	Braun Intertec Corporation
BSC	background screening criterion
BTAG	Biological Technical Assistance Group
BTEX	benzene, toluene, ethyl benzene, and xylenes
BTOC	below top of casing
BTV	background threshold value
BW	biological warfare
BZ	breathing zone; 3-quinuclidinyl benzilate
C	ceiling limit value
Ca	carcinogen
CAB	chemical warfare agent breakdown products
CAMU	corrective action management unit
CCAL	continuing calibration
CCB	continuing calibration blank
CD	compact disc
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESAS	Corps of Engineers South Atlantic Savannah
CG	carbonyl chloride (phosgene)
CFC	chlorofluorocarbon
ch	inorganic clays of high plasticity
CHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
CK	cyanogen chloride
cl	inorganic clays of low to medium plasticity
Cl.	chlorinated
CLP	Contract Laboratory Program
CN	chloroacetophenone
CNB	chloroacetophenone, benzene, and carbon tetrachloride
CNS	chloroacetophenone, chloropicrin, and chloroform
Co-60	cobalt-60
COC	chain of custody; contaminant of concern
COE	Corps of Engineers
Con	skin or eye contact
COPC	contaminant of potential concern
COPEC	contaminant of potential environmental concern
CRL	certified reporting limit
CRZ	contamination reduction zone
Cs-137	cesium-137
CS	ortho-chlorobenzylidene-malononitrile
CSEM	conceptual site exposure model
ctr.	container
CWA	chemical warfare agent
CWM	chemical warfare material; clear, wide mouth
CX	dichloroformoxime
'D'	duplicate; dilution
DAF	dilution-attenuation factor
DANC	decontamination agent, non-corrosive
°C	degrees Celsius
°F	degrees Fahrenheit
DCE	dichloroethene
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
DEH	Directorate of Engineering and Housing
DEP	depositional soil
DI	deionized
DIMP	di-isopropylmethylphosphonate
DMMP	dimethylmethylphosphonate
DOD	U.S. Department of Defense
DOJ	U.S. Department of Justice
DOT	U.S. Department of Transportation
DP	direct-push
DPDO	Defense Property Disposal Office
DPT	direct-push technology
DQO	data quality objective
DRMO	Defense Reutilization and Marketing Office
DRO	diesel range organics
DS	deep (subsurface) soil
DS2	Decontamination Solution Number 2
DWEL	drinking water equivalent level
E&E	Ecology and Environment, Inc.
EBS	environmental baseline survey
EE/CA	engineering evaluation and cost analysis
Elev.	elevation
EM	electromagnetic
EM31	Geonics Limited EM31 Terrain Conductivity Meter
EM61	Geonics Limited EM61 High-Resolution Metal Detector
EOD	explosive ordnance disposal
EODT	explosive ordnance disposal team
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
EPIC	Environmental Photographic Interpretation Center
ER	equipment rinsate
ESE	Environmental Science and Engineering, Inc.
ESN	Environmental Services Network, Inc.
ESV	ecological screening value
Exp.	explosives
E-W	east to west
EZ	exclusion zone
FAR	Federal Acquisition Regulations
FB	field blank
FD	field duplicate
FedEx	Federal Express, Inc.
FEMA	Federal Emergency Management Agency
FFE	field flame expedient
Fil	filtered
Flt	filtered
FML	flexible membrane liner
FMP 1300	Former Motor Pool 1300
FOMRA	Former Ordnance Motor Repair Area
Foster Wheeler	Foster Wheeler Environmental Corporation

List of Abbreviations and Acronyms *(Continued)*

Frtn	fraction
FS	field split; feasibility study
FSP	field sampling plan
ft	feet
ft/ft	feet per foot
FTA	Fire Training Area
FTMC	Fort McClellan
FTRRA	FTMC Reuse & Redevelopment Authority
g	gram
G-856	Geometrics, Inc. G-856 magnetometer
G-858G	Geometrics, Inc. G-858G magnetic gradiometer
gal	gallon
gal/min	gallons per minute
GB	sarin
gc	clay gravels; gravel-sand-clay mixtures
GC	gas chromatograph
GC/MS	gas chromatograph/mass spectrometer
GCR	geosynthetic clay liner
GFAA	graphite furnace atomic absorption
GIS	Geographic Information System
gm	silty gravels; gravel-sand-silt mixtures
gp	poorly graded gravels; gravel-sand mixtures
gpm	gallons per minute
GPR	ground-penetrating radar
GPS	global positioning system
GS	ground scar
GSA	General Services Administration; Geologic Survey of Alabama
GSBP	Ground Scar Boiler Plant
GSSI	Geophysical Survey Systems, Inc.
GST	ground stain
GW	groundwater
gw	well-graded gravels; gravel-sand mixtures
HA	hand auger
HCl	hydrochloric acid
HD	distilled mustard
HDPE	high-density polyethylene
Herb.	herbicides
HNO_3	nitric acid
hr	hour
H&S	health and safety
HSA	hollow-stem auger
HTRW	hazardous, toxic, and radioactive waste
‘I’	out of control, data rejected due to low recovery
ICAL	initial calibration
ICB	initial calibration blank
ICP	inductively-coupled plasma
ICRP	International Commission on Radiological Protection
ICS	interference check sample
ID	inside diameter
IDL	instrument detection limit
IDLH	immediately dangerous to life or health
IDM	investigative-derived media
IDW	investigation-derived waste
ILCR	incremental lifetime cancer risk
IMPA	isopropylmethyl phosphonic acid
IMR	Iron Mountain Road
in.	inch
Ing	ingestion
Inh	inhalation
IP	ionization potential
IPS	International Pipe Standard
IRDMIS	Installation Restoration Data Management Information System
ISCP	Installation Spill Contingency Plan
IT	IT Corporation
ITEMS	IT Environmental Management System ™
‘J’	estimated concentration
JeB2	Jefferson gravelly fine sandy loam, 2 to 6 percent slopes, eroded
JeC2	Jefferson gravelly fine sandy loam, 6 to 10 percent slopes, eroded
JfB	Jefferson stony fine sandy loam, 0 to 10 percent slopes have strong slopes
JPA	Joint Powers Authority
K	conductivity
L	lewisite; liter
LC_{50}	lethal concentration for 50 percent of population tested
LD_{50}	lethal dose for 50 percent of population tested
l	liter
LCS	laboratory control sample
LEL	lower explosive limit
LOAEL	lowest-observed-adverse-effects-level
LT	less than the certified reporting limit
LUC	land-use control
LUCAP	land-use control assurance plan
LUCIP	land-use control implementation plan
max	maximum
MCL	maximum contaminant level
MDC	maximum detected concentration
MDL	method detection limit
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
mh	inorganic silts, micaceous or diatomaceous fine, sandy or silt soils
MHz	megahertz
µg/g	micrograms per gram
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
min	minimum
MINICAMS	miniature continuous air sampling system
ml	inorganic silts and very fine sands
mL	milliliter
mm	millimeter
MM	mounded material
MOGAS	motor vehicle gasoline
MPA	methyl phosphonic acid
MR	molasses residue
MS	matrix spike
mS/cm	millisiemens per centimeter
MSD	matrix spike duplicate
MTBE	methyl tertiary butyl ether
msl	mean sea level
MtD3	Montevallo shaly, silty clay loam, 10 to 40 percent slopes , severely eroded
mV	millivolts
MW	monitoring well
NA	not applicable; not available
NAD	North American Datum
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988
NCP	National Contingency Plan
ND	not detected
NE	no evidence; northeast
ne	not evaluated
NFA	No Further Action
ng/L	nanograms per liter
NGVD	National Geodetic Vertical Datum
NIC	notice of intended change
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
No.	number
NOAA	National Oceanic and Atmospheric Administration
NOAEL	no-observed-adverse-effects-level
NR	not requested; not recorded
ns	nanosecond
N-S	north to south
NS	not surveyed
nT	nanotesla
NTU	nephelometric turbidity unit
nv	not validated
O&G	oil and grease
O&M	operating and maintenance
OD	outside diameter
OE	ordnance and explosives
oh	organic clays of medium to high plasticity
ol	organic silts and organic silty clays of low plasticity
OP	organophosphorus
ORP	oxidation-reduction potential

List of Abbreviations and Acronyms *(Continued)*

OSHA	Occupational Safety and Health Administration
OWS	oil/water separator
oz	ounce
PA	preliminary assessment
PAH	polynuclear aromatic hydrocarbon
Parsons	Parsons Engineering Science, Inc.
Pb	lead
PCB	polychlorinated biphenyl
PCE	perchloroethene
PCP	pentachlorophenol
PDS	Personnel Decontamination Station
PEL	permissible exposure limit
Pest.	pesticides
PFT	portable flamethrower
PG	professional geologist
PID	photoionization detector
PkA	Philo and Stendal soils local alluvium, 0 to 2 percent slopes
POL	petroleum, oils, and lubricants
PP	peristaltic pump
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
PPMP	Print Plant Motor Pool
ppt	parts per thousand
PRG	preliminary remediation goal
PSSC	potential site-specific chemical
pt	peat or other highly organic silts
PVC	polyvinyl chloride
QA	quality assurance
QA/QC	quality assurance/quality control
QAP	installation-wide quality assurance plan
QC	quality control
QST	QST Environmental, Inc.
qty	quantity
Qual	qualifier
'R'	rejected data; resample
RAO	removal action objective
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
RDX	cyclonite
RfD	reference dose
ReB3	Rarden silty clay loams
REG	regular field sample
REL	recommended exposure limit
RFA	request for analysis
RGO	remedial goal option
RI	remedial investigation
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
RSD	relative standard deviation
RTK	real-time kinematic
SAD	South Atlantic Division
SAE	Society of Automotive Engineers
SAIC	Science Applications International Corporation
SAP	installation-wide sampling and analysis plan
sc	clayey sands; sand-clay mixtures
Sch.	schedule
SD	sediment
SDG	sample delivery group
SDZ	safe distance zone; surface danger zone
SEMS	Southern Environmental Management & Specialties, Inc.
SFSP	site-specific field sampling plan
SGF	standard grade fuels
SHP	installation-wide safety and health plan
SI	site investigation
SL	standing liquid
SLERA	screening-level ecological risk assessment
sm	silty sands; sand-silt mixtures
SM	Serratia marcescens
SOP	standard operating procedure
sp	poorly graded sands; gravelly sands
SP	submersible pump
Sr-90	strontium-90
SRA	streamlined human health risk assessment
Ss	stony rough land, sandstone series
SS	surface soil
SSC	site-specific chemical
SSHO	site safety and health officer
SSHP	site-specific safety and health plan
SSL	soil screening level
SSSL	site-specific screening level
SSSSL	site-specific soil screening level
STB	supertropical bleach
STC	source term concentrations
STEL	short-term exposure limit
STOLS	Surface Towed Ordnance Locator System®
Std. units	standard units
SU	standard unit
SVOC	semivolatile organic compound
SW	surface water
SW-846	U.S. EPA's *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*
SWPP	storm water pollution prevention plan
SZ	support zone
TAL	target analyte list
TAT	turn around time
TB	trip blank
TCA	trichloroethane
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TCDF	tetrachlorodibenzofurans
TCE	trichloroethene
TCL	target compound list
TCLP	toxicity characteristic leaching procedure
TDGCL	thiodiglycol
TDGCLA	thiodiglycol chloroacetic acid
TERC	Total Environmental Restoration Contract
TIC	tentatively identified compound
TLV	threshold limit value
TN	Tennessee
TOC	top of casing; total organic carbon
TPH	total petroleum hydrocarbons
TRADOC	U.S. Army Training and Doctrine Command
TRPH	total recoverable petroleum hydrocarbons
TWA	time-weighted average
UCL	upper confidence limit
UCR	upper certified range
'U'	not detected above reporting limit
USACE	U.S. Army Corps of Engineers
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USAEC	U.S. Army Environmental Center
USAEHA	U.S. Army Environmental Hygiene Agency
USACMLS	U.S. Army Chemical School
USAMPS	U.S. Army Military Police School
USATEU	U.S. Army Technical Escort Unit
USATHAMA	U.S. Army Toxic and Hazardous Material Agency
USCS	Unified Soil Classification System
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UST	underground storage tank
UTL	upper tolerance level
UXO	unexploded ordnance
VOA	volatile organic analyte
VOC	volatile organic compound
VOH	volatile organic hydrocarbon
VQlfr	validation qualifier
VQual	validation qualifier
VX	nerve agent (O-ethyl-S-[diisopropylaminoethyl]-methylphosphonothiolate)
Weston	Roy F. Weston, Inc.
WP	installation-wide work plan
WS	watershed
WSA	Watershed Screening Assessment
WWI	World War I
WWII	World War II

XRF	x-ray fluorescence
yd^3	cubic yards

SAIC – Data Qualifiers, Codes and Footnotes, 1995 Remedial Investigation

N/A – Not analyzed

ND – Not detected

Boolean Codes

- LT – Less than the certified reporting limit

Flagging Codes

- 9 – Non-demonstrated/validated method performed for USAEC
- B – Analyte found in the method blank or QC blank
- C – Analysis was confirmed
- D – Duplicate analysis
- I – Interfaces in sample make quantitation and/or identification to be suspicious
- J – Value is estimated
- K – Reported results are affected by interfaces or high background
- N – Tentatively identified compound (match greater than 70%)
- Q – Sample interference obscured peak of interest
- R – Non-target compound analyzed for but not detected (GC/MS methods)
- S – Non-target compound analyzed for and detected (GC/MS methods)
- T – Non-target compound analyzed for but not detected (non GC/MS methods)
- U – Analysis in unconfirmed
- Z – Non-target compound analyzed for and detected (non-GC/MS methods)

Qualifiers

- J – The low-spike recovery is low
- N – The high-spike recovery is low
- R – Data is rejected